Northwest Regional Emergency Medical Service and Trauma Care System Plan

July 2005 – June 2007

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I. Executive Summary

The Northwest Region's EMS and Trauma Care Plan addresses all of the functional elements of our system from injury prevention through system evaluation. The plan identifies what is currently in place, system needs, and our goals, objectives and strategies for maintaining and improving our regional system during the FY06-07 biennium.

Injury Prevention and Public Information/Education (IPPE)

Our IPPE Program is focused on a variety of injury prevention activities with a goal of a decreased number of preventable traumatic injuries and deaths. State and regional data directs our prevention activities. Our projects mainly focus on deterring people in the community from risky activities that can cause serious injury or death, such as: drunk driving, falls in the elderly, children who ride their bikes without helmets, and suicide. These are ongoing community outreach projects, many of which are funded by outside grants. We have made great strides in improving awareness of injury risks and prevention measures**.** We will maintain our current program efforts, however additional funding would be needed to expand our activities.

Pre-hospital System

The pre-hospital system in the Northwest Region is a major focus of our plan. There are six distinct prehospital areas in the plan:

- **Communications:** In the Northwest region, with geographical and system barriers, the communication system needs to be dependable. Our goal is a highly functional communication system. We continually strive to improve the communication system.
- **Medical Direction of Pre-hospital Providers:** Medical direction of pre-hospital providers is delivered through Northwest Regional EMS Protocols. This biennium, the Northwest Region's EMS Protocol Committee will review and revise the Protocols and ensure that all EMS providers in our region receive a hard copy of the protocols. Our goal is revised protocols distributed to all providers. Funding for the printing and distribution of the protocols is a major concern. Agencies will have to bear the brunt of the printing costs due to lack of funds at the regional level. Current approved protocols are available on the Northwest Region's website at nwrems.org.
- **Pre-hospital EMS and Trauma Services**: Ensuring quality training of our pre-hospital EMS providers is a regional goal. The Northwest Region needs to focus on providing training classes that meet personnel needs both educational and logistical. BLS Providers currently utilize Ongoing Training and Education Program (OTEP) for recertification requirements. ILS/ALS Ongoing Training and Education Program (OTEP) is being implemented within the region. Training equipment is available to all agencies within the region.
- **Verified Aid and Ambulance Services:** The Regional goal is verified aid and ambulance services distributed where needed in the region. The Northwest Region monitors the need for verified aid and ambulance services region-wide. The need for distribution of services in our region can at times be difficult to quantify due to extremes in distance, terrain and population that characterize our counties. We will continue to serve as a resource for the agencies in our region in regards to this issue.

- **Patient Care Procedures (PCPs) and County Operating Procedures (COPS):** Patient Care Procedures are available on the website. County operating procedures are not utilized as a stand alone document. COPS have been integrated into the Northwest Region EMS Protocols. The region's goal is to keep all providers advised of any changes/revisions to the PCPs.

- **Multi-County/Inter-Regional Pre-hospital Care**: The Regional goal is to ensure everyone involved in pre-hospital care is "at the table". The region needs to expand on efforts already made to accomplish this during the last biennium. Those include work by representatives from our regional counties, representatives from the military, tribes, DEM, health districts, and hospitals. To build on this through the next biennium we will facilitate the exchange of information between all of these various agencies as well as coordinate training across county and regional lines; this will not only allow agencies to save money but it will build camaraderie among the various EMS providers. We will also focus on the upcoming closure of the Hood Canal Bridge. The bridge closure will impact all of the counties in our region and will necessitate a great deal of pre-planning.

Designated Trauma Services

Designated trauma services is an area that the Region feels is fundamental to the overall success of our EMS and Trauma Care mission. The Northwest Region will continue to encourage hospital representation on our Council, participation in our Quality Assurance program, and attendance at all-hazards planning meetings. Trauma service participation in these meetings will helps to keep the flow of information going, discussing issues before they become problems, and provide feedback where appropriate. The region has become a resource for hospitals in our region and through participation in all scheduled meetings we actively encourage inter-agency training and the sharing of training resources, with a goal of open communication between designated trauma centers in the Northwest Region resulting in maximizing resource sharing.

EMS and Trauma System Evaluation

During this biennium, the Northwest Region's goal is excellence in the QI process. The need is to encourage participation from all agencies on our regional QI committee. The region will continue to host annual QI conferences that bring information, education, and guidance from the leaders in our industry. As well as develop ideas and plans for ways in which to use the information gleaned from the regional QI process to positively help providers and patients in the Northwest Region.

All Hazards Planning

The Northwest Region has partnered with public health, representatives from the military, Native American tribes, DEM, health districts, and hospitals towards a goal of a cohesive region-wide planning process. To build on this through the next biennium we will need to facilitate the exchange of information between all of these various agencies as well as coordinate training and drills across county and regional lines; this will not only allow agencies to save money but it will build camaraderie among the various providers. We will also focus on the upcoming closure of the Hood Canal Bridge which will impact all of the counties in our region and will necessitate a great deal of pre-planning. Convening planning meetings, will bring the DOH, Department of Transportation, EMS agencies, Airlift Northwest, regional hospitals, Washington State Patrol, and other entities to the table as necessary to mitigate the effect the bridge closure will have on the region and its' agencies.

The contents of this regional plan will focus on meeting the needs and goals of the Northwest Region EMS community.

Proposed Plan Changes Requiring Department Approval

- The Regional Council is requesting a change in min/max numbers for verified services in Jefferson County to reflect the ALS level of care Port Townsend Fire has consistently been providing to the community. **See Appendix 1, page 60.**

- No recommended changes to the Patient Care Procedures.

- We have no higher than minimum standards.

- No proposed changes in Designation.

II. Authority – Regional System Coordination

A. Regional Council Coordination

1. System Status

Leadership

In accordance with WAC 245-976-960 the Northwest Region Emergency Medical Services and Trauma Care Council is the lead agency in the development of a trauma system in Clallam, Jefferson, Kitsap and Mason counties. The Northwest Region EMS Council is an incorporated, non-profit organization recognized by the State of Washington and the Federal Government.

Functions of the Northwest Region EMS Council include local council, agency, provider support, training and education, injury prevention and public education, as well as, planning and implementation of a trauma system.

Members of the Northwest Region EMS Council represent a cross section of emergency medical service providers including, but not limited to, prehospital provider agencies, health care facilities, communication centers, rehabilitation centers and concerned citizens.

The Northwest Region endeavors to avoid duplication of effort and increase productivity by collaborating and cooperating with agencies located within and outside the region.

Local EMS & Trauma Care Councils provide local knowledge and leadership in trauma system development. Local council by-laws determine membership; however, they usually include representatives from EMS agencies, trauma services and emergency dispatch centers. All hospitals located within the region, are represented by membership in the Northwest Region EMS Council. Many local councils within the Northwest Region also include membership from Naval hospitals, Naval bases, Coast Guard, Olympic National Park and Search and Rescue representatives, as well as, tribal representation from area Indian Reservations. Medical Program Directors are also local council members, as well as, Northwest Region EMS Council members. They provide Northwest Region EMS Protocols and assist with both initial and continuing EMS and trauma training within the region.

The Northwest Region EMS Council office is staffed by three fulltime and one part-time contracted employee. The Chairperson is principal contact between the Executive Board and staff. Staffing consists of a Director, Prevention Coordinator, Training Coordinator and a contracted part-time Administrative Assistant.

A contracted Prevention Coordinator is responsible for coordinating all prevention activities within the Northwest Region. Including the Helmets for Youth Foundation, the Northwest Region DUI Victim's Panel, Tread to Safety, Trauma Nurses Talk Tough and as regional representative to the DOH IPPE Committee. A Training Coordinator coordinates training activities in the Northwest Region with input from a Training/Education/Development Committee.

Council Operations

The Northwest Region EMS and Trauma Care Council is a council driven, rather than an administratively led, operation. The Director is lead person in daily office operations. The Director and council Chairperson collaborate on other issues with updates provided to members of the Executive Committee.

Northwest Region EMS Council and committee meetings are held every other month in Port Angeles. On off meeting months, Executive Committee and necessary committee meetings are held in Bremerton. This allows staff and Executive Committee members to meet and discuss on-going projects and to plan future projects.

The Northwest Region EMS Council Structure consists of membership from Clallam, Jefferson, Kitsap and Mason EMS Councils and West Olympic Peninsula EMS Council, which includes West Clallam County and West Jefferson County.

Training/Education/Development (TED) Committee

TED Committee members are representatives from prehospital agencies located within the Northwest Region. They assist in the development and revisions of Northwest Region Protocols, OTEP and Patient Care Procedures; as well as other training related matters. The Northwest Region's Training Coordinator works with the TED Committee in addressing areas of need and future direction of training for the region.

Hospital/QA Committee

This committee membership consists of representatives from each of the five major hospitals located within the Northwest Region. They are Olympic Medical Center in Port Angeles, Jefferson Healthcare in Port Townsend, Harrison Hospital in Bremerton, Mason General Hospital in Shelton and Forks Hospital in Forks. This group also includes MPD's and pre-hospital providers and is the core of a group that conducts Quality Improvement reviews and participates in the ongoing process of updating Patient Care Procedures. The QI Committee holds an annual conference where statistics from Harborview and the Department of Health are disseminated and the Northwest Region is looked at as a whole and then individually by county.

Communications Committee

The Communications Committee consists of members that are involved with their agency's communications systems and members of E911 systems from throughout the region. Their task is to identify communication systems weaknesses within their own agencies and region-wide communication problems. Once these weaknesses are identified they work together to determine a solution to the problem and to present those finding to the Northwest Region EMS Council.

Executive Committee

The Executive Committee consists of the present Chairperson, Vice-Chairperson, Secretary/Treasurer, most recent past Chairperson and two At-Large members. They fulfill a decision making process for the Northwest Region EMS Council when directed to do so by council members.

Committee members also review all accounts payable, accounts receivable, deposits and check registers on a bi-monthly basis to ensure that all accounting practices are fair and reasonable and within the region's contractual obligations with the Department of Health.

Funding Committee

Funding Committee members, in conjunction with the Executive Committee members, are tasked with the review of annual training requests and office operations budgets and to form a recommendation for the Northwest Region EMS Council.

Northwest Regional Council Mission Statement

Our mission is to promote and support a coordinated system for local Emergency Medical Services/Trauma Care Councils by:

- Providing Resources/Funding
- Enhancing Education/Training
- Promoting Data Collection Analysis
- Facilitating Communication
- Promoting Standardization
- Promoting Public Education and Prevention

MILITARY & AFFILIATED AGENCIES

The following military installations located within the Northwest Region; work closely with their appropriate local EMS council.

- Puget Sound Naval Station
- Naval Submarine Base-Bangor
- Naval Hospital-Jackson Park
- Naval Undersea Warfare Center-Keyport

In Kitsap County the military installations have their responding EMT-B's state certified and follow Regional Protocols and are under the direction of the local Medical Program Director. They also hold membership positions on Kitsap County EMS Council.

In Clallam County, the Olympic National Park, Search and Rescue and the Coast Guard hold membership positions on the local council.

- Olympic National Park
- U.S. Coast Guard

Also in Clallam County, and members of the West Olympic EMS Council as well as the Northwest Region EMS Council, the Makah Indian Tribe participates by having their providers state certified, by following the Northwest Regional Protocols and are under the direction of the Jefferson County Medical Program Director.

EDUCATIONAL INSTITUTIONS

The following institutions play an important role in Regional trauma system development by providing initial training for new EMT-B's.

- Peninsula College – Port Angeles, Clallam County
- Olympic College – Bremerton, Kitsap County
- Olympic College – Shelton, Mason County

Colleges, working in conjunction with local council training coordinators, provide initial EMT-B courses throughout the year. Peninsula College also hosts courses for potential providers from both Clallam County and Jefferson County.

Olympic Medical Center, Jefferson Healthcare and Mason General Hospital also provide annual trauma training, including TNCC, PALS and ACLS for hospital personnel, as well as, for the appropriate level of prehospital providers.

2. Needs Statement:
Effective contacts as means of communication between the Northwest Region, local councils and agencies, military agencies, and other stakeholders need to be maintained so that all involved participate in system planning for the region. There is also a need to contact local councils to fill open Regional Council positions and to devise a plan to calculate the system cost of a region-wide trauma system.

3. Goals:

Goal 1: A forum at Regional Council meetings for local agency discussion of system planning and development.

Objective 1: Develop an agenda item concerning local systems planning for Regional Council meetings by September, 2005 meeting.

Goal 2: Regional Council member participation in committees and council planning activities.

Objective 1: A quorum of 1 member from each of 5 local councils or at least 8 members from no fewer than 3 local councils is present at all Northwest Region council meetings.

Goal 3: Additional funding sources are in place.

Objective 1: Two additional sources of funding are in place by June, 2007.

Goal 4: The Regional Council has system costs identified for future planning.

Objective 1: Develop two methods to acquire system cost information for regional planning by June 2006.

Objective 2: Include system cost in the December 2006 submission of the 2007-2009 biennial plan.

Goal 5: Ongoing contact is maintained with local EMS councils.

Objective 1: The Director of the Northwest Region EMS and TCC will attend at least one meeting quarterly at each of the local EMS councils.

Projected Costs
System Cost
It is beyond the current capability of the Regional Council to factor in all the costs of the components that comprise a region-wide trauma system.

Regional Council Costs
$95,000 staff wages, $4,500 for meetings and Council mileage, $3,000 for Northwest Region's annual QI conference, plus $27,000 in in-kind expenditures.

Critical Barriers
Lack of additional funding, and council member time constraints.

III. Injury Prevention And Public Information/Education

A. Regional IPPE Program:

1. System Status:

Table A. Regional Injury Data per 100,000 population.

Fatal Injuries 1998-2002	Clallam	Jefferson	Kitsap	Mason	Four County Total	WA State Total
Suicide	18.0	12.3	13.5	17.5	14.7	12.8
Motor Vehicle	16.5	14.6	8.4	20.4	11.8	9.2
Falls	12.4	6.9	6.7	11.8	8.4	7.0
Poison	7.2	6.1	3.4	3.7	4.3	6.9
Fire/Burn	1.6	4.6	1.8	3.3	2.2	1.0
Drowning	3.1	*	1.4	2.9	1.9	1.8
Pedestrian	*	*	1.0	*	1.2	1.4

Non-Fatal Injury Hospitalizations 1998-2002	Clallam	Jefferson	Kitsap	Mason	Four County Total	WA State Total
Falls	433.8	442.3	239.2	390.2	307.1	281.0
Suicide	54.1	72.8	52.0	64.4	55.5	48.5
Motor Vehicles	61.9	78.2	40.2	82.0	52.1	46.4
Poison	24.0	51.4	26.0	28.1	27.7	35.4
Fire/Burn	14.0	19.9	9.3	11.0	11.1	9.9
Pedestrian	4.0	7.7	5.3	7.3	5.5	7.3
Bike/Vehicle	1.9	*	1.5	*	1.6	1.7
Drowning	*	*	.9	*	0.8	0.9

Source: Washington State Injury Prevention Data Tables/ DOH Website.
Note: These are injury rates per 100,000 population, * denotes rates not calculated for values < 5

The Northwest Region's, Regional Council injury prevention public education program is comprised of several projects targeting leading causes of death and disability from injury. The rate of injury deaths and non fatal hospitalizations are compared with Washington State injury rates from 1998-2002 above.

This year, the Mason County Co-op Fire and Life Safety Organization, of which we were a member has been disbanded. Also this year, the non-profit DUI Victim's Panel organization folded. The Northwest Region has now taken over coordination of the DUI Victim's Impact Panel. In addition, the Northwest Region has also contracted all Prevention Programs to an outside contractor, a first for our organization.

Many prevention activities in the Northwest Region are coordinated with organizations and committees located in the Region including the following:

- Kitsap Safe Kids
- Peninsula Safe Kids
- Washington Traffic Safety Commission
- Helmets for Youth
- Kitsap, Mason, Clallam and Jefferson County Health Districts
- Navy and Coast Guard
- Kitsap, Mason, Clallam, and Jefferson County Fire Districts
- Mary Bridge Hospital
- Harrison Hospital
- Olympic Medical Center
- Forks Hospital
- Jefferson Healthcare
- Mason General Hospital

Motor vehicle crashes are the second-leading cause of death and the third leading cause of injury in our region; it is the objective of our DUI Program to significantly decrease the incidence of DUI-related deaths and injuries. Between 1998 and 2002, there were 219 deaths and 968 injuries in our region, a 5% reduction of these numbers would have a significant impact on the health and safety of the citizens of our region.

Between 1998 and 2002, falls accounted for 156 deaths and 5,702 injuries in our region, mostly in our elderly population. Falls are the third leading cause of death and the first leading cause of injury in our region.

In the Northwest Region, there were six deaths and 162 injuries to bicyclists during the 1998 to 2002 period. Although this is not a huge number, something as simple as wearing a helmet can make a big difference in the lives of bicyclists, their families and the medical facilities that treat these people.

With 273 deaths and 1,030 hospitalizations between1998 and 2002, suicide is the leading cause of death and second leading cause of injury in our region. This is a multi-faceted prevention issue which will require a coordinated effort among many agencies.

2. Needs Statement

We are fortunate to have many ongoing, long–term prevention programs in our region that have proven successful over the past years. Currently our IPPE needs include funding to support the various programs, information and resources in order to develop a suicide prevention program which statistics show is needed in our Region, and finding qualified speakers for our DUI Victim's Panels.

3. Goals:

Goal 1: Preventable/premature death and disability due to injury is reduced in the region through IPPE efforts.

Objective 1: DUI Program - It is the objective of our DUI Program to significantly decrease the incidence of DUI-related deaths and injuries by coordinating a comprehensive DUI Program to achieve a 5% reduction of alcohol-related crashes by June of 2007.

Strategies:

Strategy 1: Provide at least one DUI Victim's Impact Panel, per county, per month in our region.

Strategy 2: Provide targeted DUI Victim's Impact Panels (i.e.: teens, military, Spanish language) as needed.

Strategy 3: Work with the courts to provide information and the opportunity to attend our DUI Victim's Impact Panels for at least 65% of the people convicted of DUI offenses in our Region.

Strategy 4: Provide handouts with anti-DUI messages at all panels, through the schools, and through other public events.

Strategy 5: The 'Trauma Nurses Talk Tough' program will be presented at least once a month in each county of our region.

Strategy 6: Participate in Mock Crashes that are held throughout our region. Serve as a conduit of information from the Washington State Traffic Safety Commission to the public.

Strategy 7: Grants will be written to provide funds for special projects (i.e.: to provide calling cards with an anti-DUI message to all graduating seniors in the region, etc.).

Projected Costs
$40,000 system cost of which $5,000 is Council expense and $35,000 is generated by the DUI Panels.

Critical Barriers
Finding speakers for our DUI Victim's Impact Panels.

Objective 2: Falls Prevention Program - It is the objective of our Falls Prevention Program to focus on the elderly and educate them and their care-givers about the far-reaching complications of falls and how to prevent them in order to achieve a 5% reduction in falls by the elderly in our region by June of 2007.

Strategies:

1. Create a flyer that lists simple ways to prevent falls.
2. Provide the flyer, by targeted mailing, to assisted living centers in our region.
3. Provide a minimum of 100 flyers to senior centers in our region per month.
4. Provide information on falls (statistics, prevention activities) though the Northwest Region website.
5. Provide Falls Prevention materials (flyers, other handouts) throughout the Region via Safety Fairs, and local prevention events.

Projected Costs
System cost will be $6,000.
Council cost will be $1,000.

Critical Barriers
None.

Objective 3: Bicycle Helmets and Bicycle Safety Program - Our objective with this program is to reduce the number of injuries and fatalities related to not wearing a bicycle helmet by 50% by 2010, beginning with a 5% decrease each year of the next biennium.

Strategies:

1. 1,500 helmets will be provided to schools, youth groups and other programs as needed and tracked by the region during this biennium.
2. Information on how to properly fit a bicycle helmet, including a video, will be provided to all organizations that request helmets for their programs.
3. Bicycle safety handouts will be provided through local safety fairs and other regularly scheduled events.
4. Information on bicycle safety, including statistics and effective bicycle rodeo ideas will be provided on the region's website.
5. The Region will Work with the Helmets for Youth Foundation to procure and distribute helmets as available.

Projected Costs
System cost will be $10,000.
Council costs will be $3,000.

Critical Barriers
Difficulty obtaining funds to purchase additional helmets.

Objective 4: Suicide Prevention Program - This is a new focus area within the Northwest Region. Our objective for this program is to identify and coordinate appropriate existing suicide prevention programs within our Region by June 06.

Strategies:

Strategy 1: The Region will gather information (handouts, pamphlets, counseling information) from the various entities in the region that deal with suicide prevention and provide this information through various events (safety fairs, etc).

Strategy2: Suicide prevention information will be provided on the Region's website, including the national suicide prevention hotline, local crisis numbers, and links to other programs.

Strategy 3: Suicide prevention presentations (Washington State Youth Suicide Prevention Program, Yellow Ribbon foundation) will be facilitated by the Region to interested organizations.

Projected Costs
System cost is unknown.
Council costs will be $1,200

Critical Barriers
None.

Objective 5: Other Prevention Activities - Participate in monthly and less frequent local prevention efforts.

Strategies:

Strategy 1: Attend local Safe Kids meetings in our region, and partner in their projects as time allows.

Strategy 2: Utilize the Region's 'What's Happening' newsletter to distribute prevention information, events and resources.

Strategy 3: Coordinate with local fire districts to provide fire prevention handouts at safety events.

Strategy 4: Procure information on how to avoid poisonings among children and distribute this information to children, parents and grandparents at local safety events.

Projected Costs
System cost is unknown.
Council costs will be $1,200.

Critical Barriers
None.

IV. Prehospital System

A. Communication

1. System Status:

EMS services are dispatched by a number of Dispatch Centers throughout the Northwest Region due to distance, terrain and county configurations. Two County Dispatch Centers within the Northwest Region utilize Criteria Based Dispatch. Each county has their own established operation frequencies. These frequencies allow for communication between pre-hospital units, hospitals and the communication center. EMS units contacting base hospitals, primarily utilize either HEAR radio or direct land-line communications. If multiple county jurisdictions are involved in an incident, there are alternate operating frequencies. The ability of multiple agencies and other public and private agencies to communicate with other jurisdictions is accomplished through designated frequencies or the statewide LEARN channel, HEAR or HAM radios. Hospital communications can be accomplished through HEAR frequency, MEDNET channels, landline, cellular phones and satellite telephones.

Table B. Dispatchers with EMD Training by County

Dispatch Center	FireCom	ShelCom	Neah Bay
County	Mason/Co-located	Mason/Co-located	Clallam/secondary to PenCom/tribal
# Dispatchers	5 FT, 1 PT	10 FT	4 FT, 1 PT
EMD Training Program	Powerphone	Powerphone	Powerphone
# Dispatchers EMD Trained	All	All	All
E911 and Wireless Access	E911 Phase 2 wireless	E911 Phase 2 wireless	E911
Bystander Care Instructions Given	Yes	Yes	Yes
Ability to track average call information	Yes	Yes	No, done by PenCom
Call Center Overload Divert Available	Yes, to ShelCom	Yes, to FireCom	Yes, to PenCom
Means of Communication	Primary—Radio Secondary—Cell	Primary—Radio Secondary—Cell	Primary—Radio Secondary—Cell
Needs	Repeaters (sites and upgrade of system)	More staffing	Updated recording system
Notes	Is currently putting $400,000 into system upgrade	Possibility of merging ShelCom and FireCom is in the discussion stages	

Dispatch Center	PenCom	Forks Police	Olympic National Park
County	Clallam/Primary	Clallam/secondary to PenCom	Clallam/secondary to PenCom/limited hours
# Dispatchers	15 FTE	6 FTE	2 FTE
EMD Training Program	Powerphone	Powerphone	Powerphone
# Dispatchers EMD Trained	All	All	All
E911 and Wireless Access	E911 Phase 2 wireless	E911	E911
Bystander Care Instructions Given	Yes	Yes	Yes
Ability to track average call information	Yes	No, done by PenCom	No, done by PenCom
Call Center Overload Divert Available	Yes, to backup system	Yes, to PenCom	Yes, to PenCom
Means of Communication	Primary—Radio Secondary—Cell	Primary—Radio	Primary—Radio Secondary—Cell
Needs	New facility	More staffing, updated recording system	CAD System
Notes	Will be replacing entire radio system next year.		Currently no CAD system, all records are handwritten.

Dispatch Center	JeffCom	CenCom	Bangor NSB
County	Jefferson/Primary	Kitsap/Primary	Kitsap/secondary to CenCom/military
# Dispatchers	9 FTE	49 FTE	Varies
EMD Training Program	King Co CBD	King Co CBD	King Co CBD
# Dispatchers EMD Trained	7 trained, 2 in process	All	Varies
E911 and Wireless Access	E911 Phase 2 wireless	E911 Phase 2 wireless	E911
Bystander Care Instructions Given	Yes	Yes	Yes
Ability to track average call information	Yes	Yes	No
Call Center Overload Divert Available	No	No	Yes, to CenCom
Means of Communication	Primary—Radio Secondary—Cell	Primary—Radio Secondary—Cell	Primary—Radio Secondary—Cell
Needs	Repeaters, staffing	None	None
Notes		Has recently completed construction of new facility and will move in March 2005.	Will be merging with NesCom in March 2005 and will dispatch for all bases in Navy Region NW.

Dispatch Center	NesCom	State Patrol
County	Kitsap/secondary to CenCom/military	All counties in region
# Dispatchers	9 FTE	15 FTE
EMD Training Program	King Co CBD	No medical dispatch
# Dispatchers EMD Trained	6, 3 in training	None
E911 and Wireless Access	E911	E911 Phase 1 wireless
Bystander Care Instructions Given	Yes	N/A
Ability to track average call information	No	N/A
Call Center Overload Divert Available	Yes, to CenCom	Yes, to CenCom
Means of Communication	Primary—Radio	Primary—Radio Secondary—Cell
Needs	None	Mutual training program
Notes	Will be merging with Bangor NSB in March 2005 and will dispatch for all bases in Navy Region NW.	All medical calls routed to CenCom.

2. Need Statement
A functional system that will handle day to day communications, large scale all hazard incidents within the region and large scale incidents statewide and Nationally needs to be in place within the Northwest Region.

3. Goal:
Goal 1: A comprehensive communication system which meets the communications needs of the Northwest Region for day to day situations and large scale all hazard incidents is in place.

Objective 1: Meet with users and providers of communication systems annually to facilitate the exchange of information, resources, and create a cohesive overall communication system within the Northwest Region.

Strategies

Strategy 1: Identify current key contacts for all stakeholder groups by June 31, 2006.

Strategy 2: Include key contacts in regional committee or meetings on communication planning.

Projected Cost
System cost
Not able to be determined.

Regional Council Cost
None at this time.

Critical Barriers
A unified communication system is beyond scope of regional action.

B. Medical Direction of Pre-hospital Providers

1. System Status:

Medical Program Directors (MPD's) are an integral link between prehospital care providers and the region's hospitals.

MPD's participate in writing protocols, approve continuing medical education programs, recommend recertification, and quality assurance for all prehospital care providers. Each of the MPDs conduct monthly Base Station Training sessions for their providers; this enables regular direct interaction between MPD and the Provider.

MPD's in the Northwest Region provide field direction, utilizing Northwest Region Patient Care Protocols. Regional Patient Care Protocols for BLS, ILS and ALS providers are well established in all counties. It has been proven that regional protocols are more beneficial to Northwest Region citizens than individual county protocols. Patients are routinely transported across county lines for treatment and a universal regional protocol maintains the highest quality of care across county boundaries.

Northwest Region MPD's have convened a Protocol Committee, comprised of BLS, ILS & ALS providers from all counties within the region and regional staff members, to revise and update the Patient Care Protocols. A full review incorporating updates, changes, and additions occur every two to three years.

Regional Patient Care Protocols for BLS, ILS and ALS providers are issued to all practicing providers and posted on the Region's website

Online medical control is provided through each receiving hospital within the Northwest Region. Delegated Supervising Physicians operate as Emergency Room Base Station Physicians, as outlined in the State of Washington Medical Program Director Handbook.

Due to logistics, Olympic National Park located in Clallam and Jefferson Counties is currently using a Delegated Training Physician. That delegate has assumed the training responsibility in cooperation with the county MPD; however the delegate does not have the authority to sign initial or recertification papers.

2. Need Statement

The MPDs in the Northwest Region provide very effective support and direction to providers. This effectiveness needs to be maintained.

3. Goals

Goal 1: Northwest Region MPDs continue to provide strong regional medical direction.

Objective 1: Facilitate an annual Regional MPD meeting. First meeting no later than 10/31/05.

Strategies:

Strategy 1: Determine MPD availability dates and select one that is before October 31, 2005.

Objective 2: Revised protocols printed and distributed by January 1, 2006.

Strategies:

1. Convene Protocol Committee to have full draft recommendations by September 30, 2005.
2. MPDs to discuss and approve protocols at the MPD meeting in preparation for distribution to providers and posting on the Northwest Region website by January 1, 2006.

Objective 3: All providers have revised protocols by January 1, 2006

Strategies:

1. Print text and create electronic PDA version by December 2005.

Projected Costs

System Cost
$8,000 Regional Funding, $24,000 in-kind, and $30,000 printing

Regional Council Cost
$8,000

Critical Barriers

None.

C. Pre-Hospital EMS And Trauma Services

1. SYSTEM STATUS:

Table C. Prehospital Providers by County and Level

County	FY 04-05 Plan											
	Car FR	Vol FR	Car EMT	Vol EMT	Car EMT-IV	Vol EMT-IV	Car EMT-IV/AW	Vol EMT-IV/AW	Car EMT-ILS	Vol EMT-ILS	Car PM	Vol PM
Clallam	0	23	55	199	4	16	0	4	0	3	29	3
Jefferson	11	6	15	77	3	16	0	0	2	13	11	1
Kitsap	5	10	278	246	33	6	0	0	0	0	62	0
Mason	0	32	29	134	13	29	1	0	0	0	24	0
Region Totals	16	71	377	656	53	67	1	4	2	16	126	4

County	FY 06-07 Plan											
	Car FR	Vol FR	Car EMT	Vol EMT	Car EMT-IV	Vol EMT-IV	Car EMT-IV/AW	Vol EMT-IV/AW	Car EMT-ILS	Vol EMT-ILS	Car PM	Vol PM
Clallam	3	9	50	155	3	18	0	2	0	2	30	4
Jefferson	1	3	14	63	2	9	0	0	2	12	13	1
Kitsap	7	4	258	203	23	10	0	0	0	0	70	1
Mason	0	16	24	123	14	26	1	0	0	0	25	0
Region Totals	11	32	346	544	42	63	1	2	2	14	138	6

Prehospital Providers/Response – status

There are 1200 providers in the Northwest Region. They provide EMS response to a mix of urban and rural areas. EMS providers face a number of challenges in delivering care to patients in the Northwest Region. In our rural areas EMS services are provided by volunteer/career agencies and have significantly longer response times and transports to receiving facilities than in urban areas. Also in rural areas emergency medical services are given by BLS providers, with limited resources and equipment. In the suburban areas emergency medical services are provided by BLS, ILS, and ALS agencies with a wider range of resources. Urban areas in the Northwest Region have full ALS coverage. Our nearest Level 1 Trauma Center is Harborview Medical Center located in Seattle, King County. Harborview Medical Center is frequently utilized by activating existing air transport services from throughout the region.

For trauma calls, the first on-scene EMS and trauma providers assess the patient(s) for the possibility of activation of the Trauma System in accordance with State of Washington Pre-hospital Trauma Triage (Destination) Procedures by using Northwest Region Patient Care Procedure. Upon evaluation of the patient(s) and determination of the need for a trauma team, the Paramedic, EMT, or Incident Commander will contact medical control at the nearest or most appropriate designated trauma center that they are transporting a major trauma patient so that the hospital can activate their trauma team.

Once identified, trauma patients receive a trauma band, are treated, transported and trauma data collected as quickly as possible. In all cases, the goal of the Northwest Region Trauma System is to have all major trauma patients delivered to the most appropriate trauma center within "the golden hour" for the best possible outcome, decreasing morbidity and mortality.

Prioritizing and Conducting Pre-hospital Training -Status

Training is a well supported element of the system in the Northwest Region. Local agencies and County EMS Councils dictate the budget and schedule pre-hospital training. Request for Proposals (RFP's) are sent to all agencies within the Northwest Region during the month of December. Agencies are directed to complete an application identifying training needs, project objective including what training is required, and assessment of why the training is necessary (including personnel numbers), describe how training will be completed and how the success of the project will be measured or evaluated.

Completed applications are then sent to their local council for review and prioritization and then forwarded to the regional office. A review by the Executive and Funding Committees determines actual need, contractual compliance and establishes budgetary parameters. A recommendation is to be taken to the full council for approval.

First Responder, Emergency Medical Technician-Basic, Emergency Medical Technician-Intermediate, Intravenous Technician and Advanced Life Support courses are budgeted and coordinated through a hosting agency or Training Coordinator.

Local resources are utilized to facilitate training needs. For example;

- Clallam County agencies utilize Peninsula Community College located in Port Angeles WA for initial First Responder and Emergency Medical Technician courses.

- The West Olympic Peninsula agencies conduct initial and ongoing training within their own departments. Due to the remote location of the West Olympic Peninsula instructors are comprised of nurses and physicians from the local hospitals and clinics, experienced EMS providers within their own agencies as well as instructors from outside their area.

- Jefferson County EMS Council has a designated Training Coordinator who fulfills the scheduling and instruction needs of that county.

- Kitsap County EMS Council also has a Training Coordinator who fulfills the scheduling and instruction needs. Kitsap uses the resources provided by Olympic Community College located in Bremerton WA.

- Mason County EMS council has established a Training Committee which meets regularly to schedule courses and instructors for their departments. They now also have a county Training Coordinator.

An Ongoing Training Education Program (OTEP) has been developed by the Northwest Region to provide continuing education for BLS providers.

OTEP is currently used by all agencies located within the region including military personnel with:

- Puget Sound Naval Shipyard
- Naval Submarine Base Bangor
- Naval Undersea Warfare Base - Keyport, and the
- Coast Guard

OTEP is also being used by:

- Olympic National Park
- Search and Rescue

OTEP is comprised of modules which cover the cognitive and psychomotor aspects of standard EMS training. The current OTEP is based on the national standards for First Responder and Emergency Medical Technician curriculum along with Washington State Specific Objectives. Each module has a written knowledge assessment evaluation and skills lab which pertain to the subject matter. With MPD approval and active participation in an approved BLS / ILS / ALS OTEP, providers are able to satisfy the required continuing education requirements in order to renew their Washington State EMS Certifications.

Initial Paramedic level training is not available in the Northwest Region. Intermediate Life Support and Paramedic level providers receive CME through monthly MPD base station training or in Mason and Jefferson Counties may participate in ILS / ALS OTEP as directed and approved by the respective MPD.

The 2003 updated edition of the BLS OTEP has been distributed to all Regional Agencies and Training Coordinators. An ILS / ALS OTEP template is available on the Northwest Region's website through a link to Washington State DOH Office of Emergency Medical Services.

Other adjunctive courses such as ACLS, PALS, 48hr Paramedic Refresher, and Instructor Workshops are made available for providers through the Northwest Region EMS & Trauma Care Council office, individual county EMS councils, or local agencies.

Additional Public Safety Personnel - System Status

Due to the natural geography, weather conditions, variety of industry, and tourism within the Northwest Region, working relationships with other public safety personnel are well established.

- Local Public Health Jurisdictions maintain communicable disease syndromic surveillance.

- County and municipal law enforcement has always been and always will be a vital compliment to the EMS system.

- The National Park Service encompasses a large portion of the region. The National Park Service personnel are trained and certified at the levels of First Aid, First Responder, and Emergency Medical Technician-Basic. They have the ability to respond, treat and extricate victims until local help arrives or an air-evacuation occurs.

- Search and Rescue (SAR) teams are available for victim location and extrication with a volunteer pool that is well trained in wilderness medicine and association with local EMS agencies.

- Hazardous Material Teams who assist with clean up and control of chemicals and other toxic materials encountered during EMS calls, are available through local fire departments and United States Naval Submarine Base Bangor located in Kitsap County.

- The United States Coast Guard is a valuable entity within the region, as coastal waters surround the Northwest Region on three sides. With their aircraft and water vessels they can quickly and efficiently locate and extract injured and ill victims for direct transport to local hospitals, trauma centers or rendezvous with local EMS providers.

2. Need Statement:

There are needs in the region related to recruitment and retention and education and training. Recruitment, retention, initial and ongoing training of personnel is imperative to maintain quality patient care and an ongoing issue in the regional system. Even with training assistance we are still losing a good part of the volunteer pool. Under its role in regional coordination the Northwest Region's office staff continually supports agencies and personnel by educating them how the Washington DOH EMS system works throughout the process of becoming a certified provider and maintaining that certification. Assistance begins with course applications, funding reimbursement, instructor resources, training equipment resources, course completion examinations and continuing education

A vital component of recruitment and retention efforts is making initial and continuing training opportunities available to all Northwest Region EMS providers. The Northwest Regional EMS & Trauma Care Council assists agencies in meeting their personnel recruitment, retention, and training needs in a variety of ways.

Demographically, the Northwest Region has a very large volunteer personnel population and coupled with geographical barriers it is a challenge to meet training needs, especially considering the need for more training due to the advancement of the EMS system, and the time limitations of the volunteer population.

Additional training or equipment needs are addressed on an as needed basis requiring a written request from the appropriate local council. Requests are reviewed by the Executive and Funding Committees for compliance and approval by the full council or by the Executive Committee if so directed by the council.

Although there are quite a few SEIs and EMS evaluators in the Northwest Region, they are not equally distributed throughout the Region. In the Rural areas, there are very few instructors. Often they have to scrape together enough evaluators for exams and OTEP exercises.

3. Goals

Goal 1: An adequate number of pre-hospital providers are available to meet the needs for EMS and trauma care service delivery throughout the Northwest Region.

Objective 1: Continue to track and report the number of trained responders in each county system annually and use the information in regional planning sessions in order to meet personnel resource needs, especially in rural areas, report on regional actions planned to address any identified.

Strategies:

Strategy 1:
Utilize state data on numbers and levels of providers in planning.

Strategy 2: Utilize the education committee, and local council representatives to assess needs, determine actions, and develop and present reports.

Goal 2: Ongoing Training and Evaluation Program is used to ensure prehospital providers meet the needs of EMS and trauma care service delivery throughout the Northwest Region.

Objective: Annually budget funding for maintenance of the regional Ongoing Training and Evaluation Program (OTEP) throughout the Northwest Region.

Strategies:

Strategy 1: Hold EMS Evaluator workshops, at least one in each county within the Northwest region by June 31, 2006.

Strategy 2: Budget funding to support OTEP by July 2006.

Strategy 3: Prioritize training funding through yearly Executive Funding Committee meetings held each spring.

Goal 3: A forum for communication between all public safety personnel in our region.

Objective 1: Utilize additional public safety personnel resources within the community as needed annually and report their involvement in regional planning in June 2006 and June 2007.

Strategies:

Strategy 1: Include additional public safety personnel in committees and planning for regional needs.

Projected Costs
System Cost

$250,000 initial EMT training, $720,000 BLS CME/OTEP, $210,000 ALS/ILS OTEP/CME annually

Regional Council Cost
$51,000 reimbursed

System Cost
$210,000 ALS/ILS OTEP/CME, $720,000 BLS OTEP/CME

Regional Council Cost
$7,500 ALS/ILS, $1080 BLS

Critical Barriers
For human resources and training barriers are funding, geographic logistics and providers' time constraints (especially in our large volunteer pool).

D. Verified Aid & Ambulance Services

1. System Status

Clallam County

Table D1 - Approved Min/Max numbers of Verified Trauma Services By Level & Type – Clallam County

Clallam County Services	STATE APPROVED		CURRENT STATUS
	MIN	MAX	
Aid - BLS	1	2	1
Aid - ILS	0	0	0
Aid - ALS	1	2	1
Amb-BLS	5	6	4
Amb - ILS	0	0	0
Amb - ALS	2	3	2

Table E1 - Trauma Response Areas - Clallam County

Clallam County Trauma Response Area Number	Description of Trauma Response Area's Geographic Boundaries	Type and # of Verified Services in each Response Areas * use key
#1	Within the current city limits of Port Angeles	F-1
#2	CCFD # 2 responds within its current boundaries	D-1
#3	CCFD # 3 responds within the current city limits of Sequim	F-2
#3	Olympic Ambulance responds within the current city limits of Sequim and surrounding rural area	F-2
#4	CCFD # 4 responds within its current boundaries	D-1
#5	CCFD # 5 responds within its current boundaries	D-1
#6	Ray Ellis Ambulance Responds within Forks township and surrounding rural/wilderness area	D-1
#7	Neah Bay Ambulance responds within the Makah Indian Nation and surrounding wilderness	D-1

***Key: For each level the type and number should be indicated**

Aid-BLS = A	Ambulance-BLS = D
Aid-ILS = B	Ambulance-ILS = E
Aid-ALS = C	Ambulance-ALS = F

The prehospital response system in Clallam County is divided into seven areas. These areas include five fire districts, the City of Port Angeles, Olympic National Park (ONP), a hospital district and a Native American Indian Nation. Because the county ranges from an urban area to wilderness, the levels of care vary greatly across the county. In some of the more rural parts of Clallam County, they rely on all volunteer EMS, and lack the volunteers to staff the agencies properly. This problem coupled with what can often be very long transport times, sometimes leaves a gap in coverage.

Clallam County Fire District #2 surrounds the City of Port Angeles on three sides and currently provides BLS response and contracts with a private company to provide ALS and transportation to Olympic Medical Center in Port Angeles. The district has three aid vehicles housed, one in each of its stations. One of these vehicles is used as a backup for transportation if all other transport units are out of service. They also have contracted with a private ambulance company to have one ambulance as a back up in the event the first out is on another call. BLS response time is in the 7-9 minute range while ALS takes 20-25 minutes to respond to the edges of the district. This district is classified rural and wilderness. Even with the long responses to the extreme edges of the district, ALS responders do meet the rural response time requirement at least 80% of the time.

At the east end of the county, Clallam County Fire District #3 currently provides ALS service for the entire district by utilizing two on-duty paramedics 24 hours a day, seven days a week. These paramedics are based at the Headquarters Station and one other station located in Sequim. The district provides ALS response with an EMT driver and a Paramedic in a non-transport vehicle. Transportation services are contracted to a private ambulance company. The Paramedic places the patient and necessary equipment into a private ambulance and the Paramedic and patient are transported to Olympic Memorial Hospital (OMH) in Port Angeles. The district has eight aid vehicles, which are placed throughout the district and respond when an aid call is dispatched in their response area. These vehicles can be used for transport in the event of a Mass Casualty Incident. This agency is classified rural and wilderness.

Clallam County Fire District #4 currently provides BLS service to the residents and visitors of its district, which covers, Highway 112 between Port Angeles and Clallam Bay. Response time to the edges of their district is based on volunteer response time to the only station in the district and availability of personnel to respond. A second fire station is now under construction. Two ambulances, both located in the same station, provide BLS transportation. They cover from the west edge of Clallam County Fire District #2 on the east to the Clallam County Fire District #4 boundary at Schmidt Road on the west and south to almost the intersection of Highway 101. This area is classified rural to wilderness.

Clallam County Fire District #5 currently serves the Clallam Bay area. Response times to the edges of this district are based on volunteer response time to the only station in the district and availability of personnel to respond. They have two ambulances, both located in the same station, to provide BLS transportation. This area has been classified rural to wilderness.

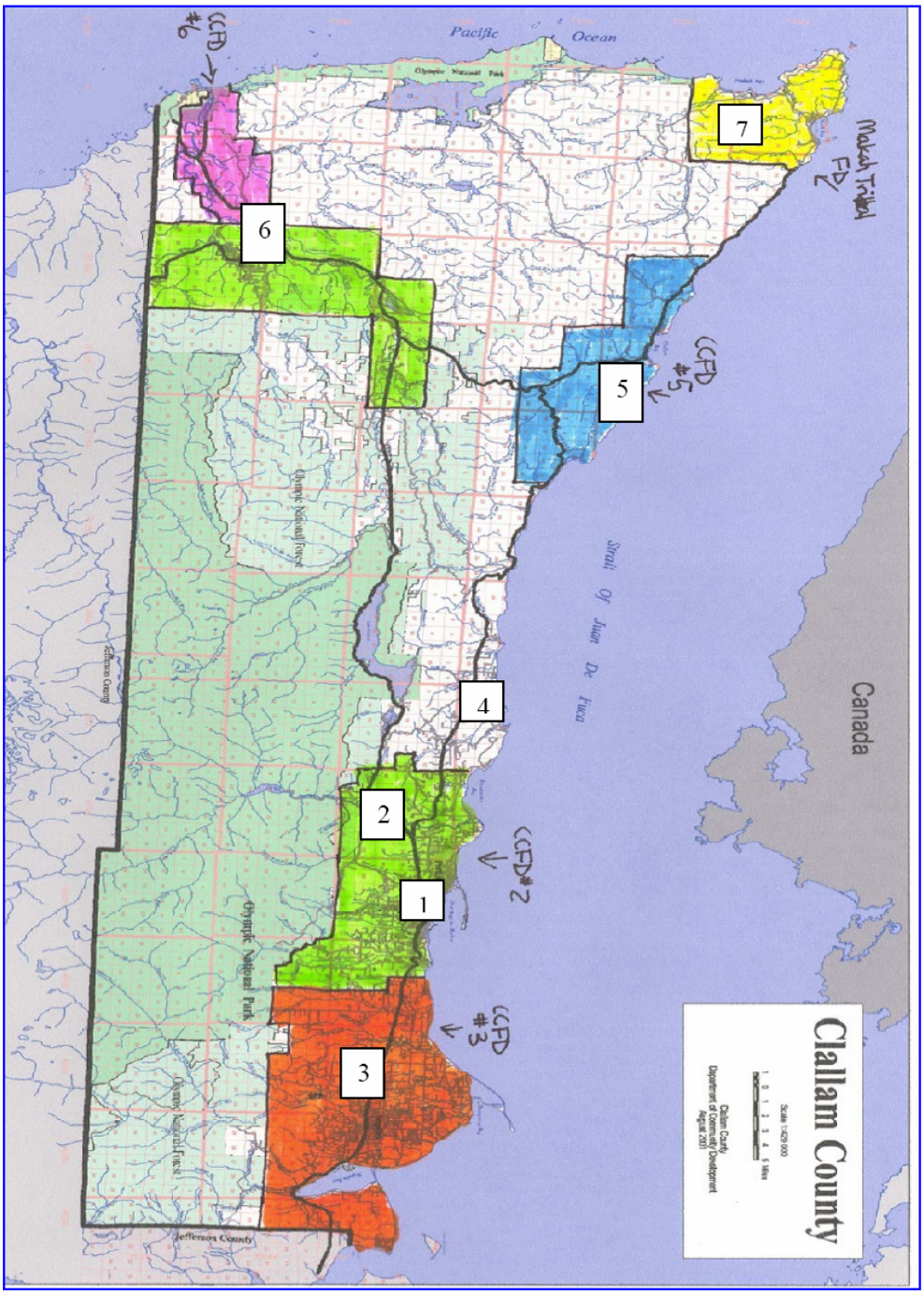
Port Angeles Fire Department currently provides both ALS and BLS response from the same facility located in the north central portion of the city. They have three transport vehicles, which include three ALS ambulances. The same local private ambulance company that provides ALS response for Clallam Fire District #2 and Olympic National Park executes BLS transports.

Forks Hospital currently provides BLS and ILS technicians when those volunteers are available. Their area currently covers from the west end of Lake Crescent along Highway 101 on south into West Jefferson County to the Grays Harbor County line. This area covers over 2,000 square miles, a large response area for one agency. Based on the volunteer response to a call, the ambulance may require up to an hour to reach the extreme southern portion of their area. This is a result of the distance from the hospital to the south edge of the response area. They have four licensed ambulances, all based at the hospital in Forks. As a result of low resident population and subsequently low call volumes, it is not feasible at this time to station any other units further north or south of the existing units.

Neah Bay Tribal Council currently provides BLS ambulance service to residents and visitors of Neah Bay as well as the surrounding areas along the coast east to Clallam Bay. Using one paid director and a volunteer response crew they can be to the extreme reaches of their area in 15 to 20 minutes. The Tribal Council has two ambulances to provide BLS care with some IV & Airway capable transportation. Neah Bay EMS currently uses the Neah Bay Clinic as their ALS support when necessary. Makah Council members, Neah Bay Clinic doctors and nursing staff are working with the MPD and Neah Bay Ambulance staff in developing strategies that will minimize the twenty-four hour on-call obligation of staff physicians to maximize patient care. One such strategy, that has been proven successful in like communities, is after-hour triage rotation by nurses. Educating citizens as to when to call or not to call 9-1-1 is also a high priority.

The Olympic National Park (ONP), although not a designated response district, covers over one million acres and is located in all counties of the Northwest Region except Kitsap. ONP uses EMTs to provide BLS to park visitors. Only the outside edge of the park has roads. The other areas are accessible only on foot or by air. A response into the wilderness area can be from 30 minutes to a full day depending on weather and location of the incident. Olympic National Park contracts with a private ambulance agency to provide transportation to the nearest healthcare facility for the injured and ill requiring transport. This area is considered extreme wilderness to remote.

Clallam County - Trauma Response Area Map



2. Need Statement

Clallam County needs to continue to be able to maintain coverage when units are out of the area or otherwise disposed.

3. Goals

Goal 1: Local EMS Council and EMS provider agencies are supported in maintaining and improving emergency services within their community.

Objective 1:
Involve Local EMS Council and EMS provider agencies in overall regional system planning, projects and operations quarterly at regional council meetings.

Strategies

Strategy 1: Encourage local Recruitment and Retention programs.

Strategy 2: Report all Prehospital EMS Training.

Strategy 3: Encourage participation in WA State DOH EMS data collection project.

Strategy 4: Identify & Coordinate Communication resources.

Strategy 5: Encourage Local County EMS Council to reevaluate distribution of services in order to ensure adequate coverage.

Strategy 6: Participate in Hood Canal Impact project.

Projected Costs
Projected costs are not available.

Critical Barriers
Funding, Council members' time constraints.

Jefferson County

Table D2 - Approved Min/Max numbers of Verified Trauma Services By Level and Type – Jefferson County

Jefferson County Services	STATE APPROVED		CURRENT STATUS
	MIN	MAX	
Aid - BLS	1	2	1
Aid - ILS	0	1	0
Aid – ALS	0	0	0
Amb – BLS	5	5	4
Amb – ILS	1	2	0
Amb - ALS	2	2	2

Table E2 - Trauma Response Areas - Jefferson County

Jefferson County Trauma Response Area Number	Description of Trauma Response Area's Geographic Boundaries	Type and # of Verified Services in each Response Areas * use key
#1	JCFD # 1responds within its current boundaries	F-1
#2	JCFD # 2 responds within its current boundaries	D-1; F-1
#3	JCFD # 3 responds within its current boundaries	F-1
#4	JCFD # 4 responds within its current boundaries	D-1; F-1
#5	JCFD # 5 responds within its current boundaries	D-1; F-1
#6	JCFD # 6 responds within its current boundaries	A-1; D-1; F-1
#7	Port Townsend Fire respond within the city limits	D-1
#8	Quilcene Volunteer Fire Department respond to rural Coyle township area	D-1; F-1

***Key: For each level the type and number should be indicated**

Aid-BLS = A	Ambulance-BLS = D
Aid-ILS = B	Ambulance-ILS = E
Aid-ALS = C	Ambulance-ALS = F

Jefferson has eight EMS response agencies, which serve the eastern portion of the county. The Olympic National Park occupies the south and most of the western portion of the county.

Jefferson County Fire District #1 currently covers the area between Port Ludlow and Port Townsend. Marrowstone Volunteer Ambulance a non-profit group disbanded during 2000. The population on Marrowstone Island is low except during the summer months when many people occupy summer cabins and the State Park is in full operation.

Jefferson County Fire District #2 currently covers the Quilcene/Coyle Peninsula area. Coyle is a sparsely populated area except in the summer months and on weekends. Quilcene, because of its location on Highway 101 sees a lot of motor vehicle collision trauma. Coyle has one ambulance to provide BLS transportation and Quilcene has two ambulances to provide IV & Airway Technician for transportation. There is also a National Forest Service Multipurpose Recreation Area in the district that has generated trauma calls related to off road motorized two and four-wheel vehicles.

Jefferson County Fire District #3 currently covers the eastern most portion of the county including Highway 104 the main east to west route through the county that connects Kitsap County on the east to Highway 101 on the west. They have three ALS Paramedic & two Aid units. The district has seen a large increase in population, particularly, retirees in the Port Ludlow area. This has resulted in an increase in the type of calls generated by an older population.

Jefferson County Fire District #4 currently covers the area from south of Jefferson County Fire District #2 to the Mason County line. This is a system staffed by volunteers, which provides BLS transportation with two ambulances. Its location along Highway 101 means it also responds to a lot of motor vehicle collision trauma. They too are impacted by the tourist season that begins in March and continues through November in this area.

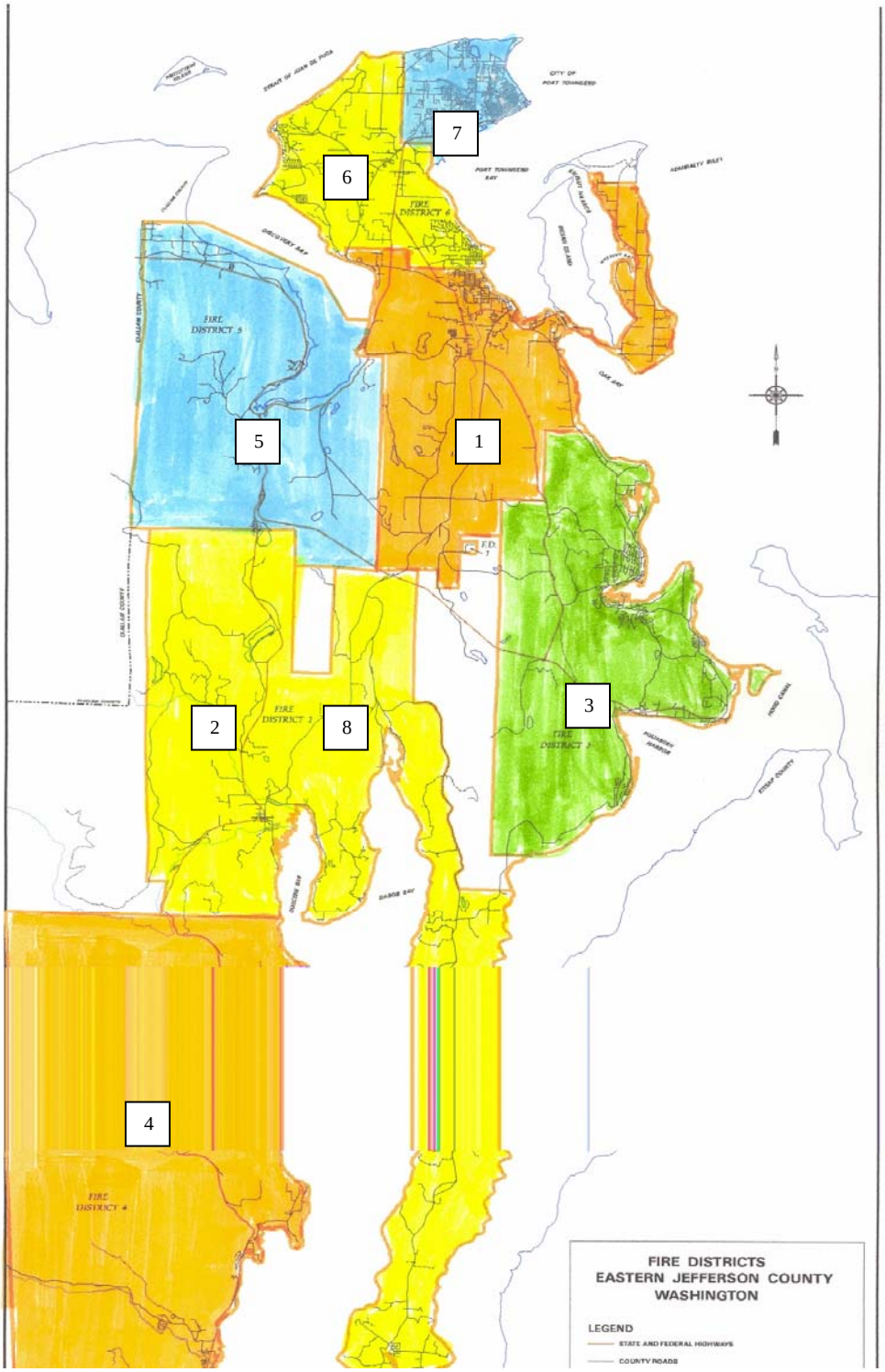
Jefferson County Fire District #5, located at the western edge of the eastern part of Jefferson County, wraps around Discovery Bay. The district, because of its location along one of the most dangerous stretches of Highway 101, gets called out many times a year to medical emergencies and trauma calls involving people who are not residents of the district or even of the county. The district has an Inter-local Agreement with Clallam County Fire District #3 for ALS service. The district currently provides BLS transportation with two ambulances.

Jefferson County Fire District #6 adjoins Port Townsend and currently provides BLS Aid unit service staffed by volunteers. They have no transportation capability. ALS and transportation services are contracted by Jefferson County Fire District #6 from Port Townsend Fire Department.

Port Townsend Fire Department presently has ALS on a part-time basis. They expand their resources at times by having off duty paramedic respond to calls when available. They have two ambulances. Paramedics from Port Townsend will rendezvous with an incoming BLS unit just outside the city limits to aid with critically ill or injured patients when an additional Paramedic is not available to respond.

Jefferson County has requested their min/max numbers be adjusted to allow for an ALS designation of service at Port Townsend Fire Department to reflect the level of service they have been providing. Paperwork has been submitted to the Department of Health with the Northwest Region's recommendation for the change.

Jefferson County - Trauma Response Area Map



2. Need Statement

Port Townsend Fire Department has applied for a licensure change from BLS Transport to an ALS Transport service. This request has received recommendation from both the Jefferson County EMS Council and the Northwest Region EMS Council. Port Townsend Fire Department, at one time, was an ALS Transport and over the years that licensure status was changed. Port Townsend Fire provides ALS service and Jefferson County needs its ALS Ambulance min/max changed to a maximum of 3 to reflect this. See attachments 2 and 4 in the appendix of this document.

3. Goals

Goal 1: Local EMS Councils and EMS provider agencies are supported in maintaining and improving emergency services within their community.

Objective 1: Involve Local EMS Council and EMS provider agencies in overall regional system planning, projects and operations quarterly at regional council meetings.

Strategies:

Strategy 1: Encourage local Recruitment and Retention programs.

Strategy 2: Report all Prehospital EMS Training.

Strategy 3: Encourage participation in WA State DOH EMS data collection project.

Strategy 4: Identify & Coordinate Communication resources.

Strategy 5: Participate in the Hood Canal Impact Project.

Strategy 6: Encourage Local County EMS Council to reevaluate distribution of services in order to ensure adequate coverage.

Strategy 7: Continue the Jefferson County EMS Council's system to ensure all providers keep there patient exposure and skills current. This is being done by setting minimum number patient contacts/calls providers respond to. Pairing inexperienced providers with experienced ALS providers and scheduling volunteer "ride along" shifts meets this goal.

Objective 2: Port Townsend Fire licensed as ALS agency by DOH.

Strategies:

Strategy 1: Paperwork (attachments 2 & 4) are included in the appendix of this plan.

Projected Costs

Projected costs are not available.

Critical Barriers

Funding and Council members' time constraints.

Kitsap County

Table D3 - Approved Min/Max numbers of Verified Trauma Services By Level and Type – Kitsap County

Kitsap County Services	STATE APPROVED		CURRENT STATUS
	MIN	MAX	
Aid - BLS	2	4	1
Aid - ILS	0	1	0
Aid - ALS	0	0	0
Amb - BLS	5	6	3
Amb - ILS	0	1	0
Amb - ALS	5	6	6

Table E3 - Trauma Response Areas - Kitsap County

Kitsap County Trauma Response Area Number	Description of Trauma Response Area's Geographic Boundaries	Type and # of Verified Services in each Response Areas * use key
#1	Central Kitsap Fire & Rescue responds within its current boundaries	F-1
#2	Bainbridge Island Ambulance responds within its current boundaries	D-1
#2	Bainbridge Island Fire Department responds within its current boundaries	F-1; D-1
#3	Bremerton Ambulance Service responds within Bremerton City limits	D-2; F-1
#3	Olympic Ambulance Service responds within Bremerton City limits	D-2; F-1
#3	Bremerton Fire responds within Bremerton City limits	F-1; D-2
#18	Poulsbo Fire responds within its current boundaries	F-1
#5	Puget Sound Federal Fire Department responds within the military facility	D-1; F-1
#5	Branch Medical Clinic responds within the military facility	D-1; F-1
#7	South Kitsap Fire & Rescue responds within its current boundaries	F-1
#10	North Kitsap Fire & Rescue responds within its current boundaries	F-1

***Key: For each level the type and number should be indicated**

Aid-BLS = A
Aid-ILS = B
Aid-ALS = C
Ambulance-BLS = D
Ambulance-ILS = E
Ambulance-ALS = F

Kitsap is one of two counties in the Northwest Region that has fulltime ALS Providers available countywide. There are six ALS agencies in Kitsap County. All ALS districts act as backup for each other when a unit is out of service.

Bremerton Fire provides ALS for the City of Bremerton and, mutual aid services to the south end of Central Kitsap Fire and Rescue. Kitsap County Fire District Number 7, Bainbridge Island Fire Department/KCFD #2, Poulsbo Fire Department, Central Kitsap Fire & Rescue and North Kitsap Fire & Rescue provide ALS and BLS for their districts.

North Kitsap Fire Rescue provides all EMS services for the Little Boston Fire Department on the S'klallam Indian Nation reservation. Kitsap County Fire District #14 has merged with North Kitsap Fire & Rescue.

Civil service and military EMS providers primarily provide BLS services for Naval facilities. ALS services are provided by county ALS agencies. All Naval branches actively support the Kitsap County EMS system.

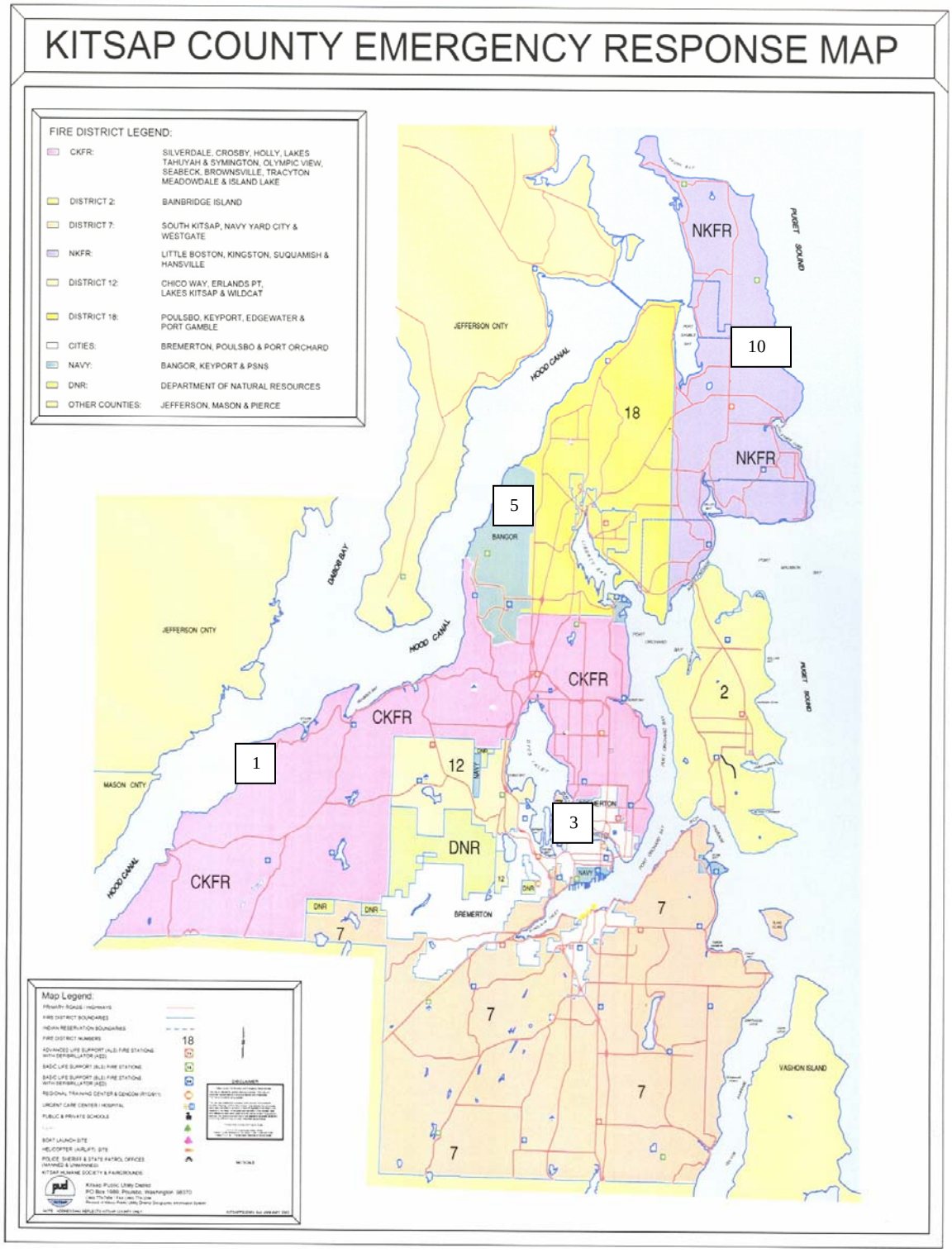
Poulsbo Fire Department, which surrounds Poulsbo, is just south of North Kitsap Fire & Rescue and provides ALS services with three Paramedic units and two aid vehicles. Poulsbo Fire Department provides ALS for Port Gamble.
Bainbridge Island Fire Department/Kitsap County Fire District #2 provides ALS services with two Paramedic units.

Central Kitsap Fire & Rescue has recently built a new headquarters building on Newberry Hill Road in Silverdale and provides ALS services with three Paramedic units and multiple BLS units. Kitsap County Fire District #12 has merged with Central Kitsap Fire & Rescue. Central Kitsap Fire & Rescue may be looking at the possible relocation of units based on population/activity increases brought about by area population increases and the added population demographics created by recent mergers and annexations. Although they have the highest number of providers within the Northwest Region, they too are experiencing the need for both paid and volunteer personnel.

The City of Bremerton provides ALS services with three Paramedics and BLS transports are rotated through two private ambulance services located within the county.

Kitsap Fire District #7 has changed its name to South Kitsap Fire and Rescue. South Kitsap Fire and Rescue provides ALS services to the City of Port Orchard and surrounding areas.

Kitsap County - Trauma Response Area Map



2. Need Statement
Kitsap County needs to continue to be able to maintain coverage when units are out of the area or otherwise disposed.

3. Goal
Local EMS Councils and EMS provider agencies are supported in maintaining and improving emergency services within their community.

Objective: Involve Local EMS Council and EMS provider agencies in overall regional system planning, projects and operations quarterly at regional council meetings.

Strategies

Strategy 1: Encourage local Recruitment and Retention programs.

Strategy 2: Report all Prehospital EMS Training.

Strategy 3: Encourage participation in WA State DOH EMS data collection project.

Strategy 4: Identify & Coordinate Communication resources.

Strategy 5: Participate in the Hood Canal Impact Project.

Strategy 6: Encourage Local County EMS Council to reevaluate distribution of services in order to ensure adequate coverage.

Projected Costs
Projected costs are not available.

Critical Barriers
Funding and Council members' time constraints.

Mason County

Table D4 - Approved Min/Max numbers of Verified Trauma Services By Level and Type – Mason County

Mason County Services	STATE APPROVED		CURRENT STATUS
	MIN	MAX	
Aid - BLS	8	8	7
Aid - ILS	0	0	0
Aid – ALS	0	0	0
Amb-BLS	5	6	5
Amb – ILS	0	0	0
Amb - ALS	3	3	3

Table E4 - Trauma Response Areas - Mason County

Mason County Trauma Response Area Number	Description of Trauma Response Area's Geographic Boundaries	Type and # of Verified Services in each Response Areas * use key
#1	MCFD # 1responds within its current boundaries	A-1; D-1; F-1
#2	MCFD # 2 responds within its current boundaries	F-1
#3	MCFD # 3 responds within its current boundaries	D-1; F-1
#4	MCFD # 4 responds within its current boundaries	D-1; F-1
#5	MCFD # 5 responds within its current boundaries	F-1
#6	MCFD # 6 responds within its current boundaries	D-1; F-1
#8	MCFD # 8 responds within its current boundaries	D-1; F-1
#9	MCFD # 9 responds within its current boundaries	A-1; D-1; F-1
#11	MCFD # 11responds within its current boundaries	A-1; D-1; F-1
#12	MCFD # 12 responds within its current boundaries	A-1; D-1; F-1
#13	MCFD # 13 responds within its current boundaries	A-1; D-1; F-1
#16	MCFD # 16 responds within its current boundaries	L-A-1; D-1; F-1
#17	MCFD # 17 responds within its current boundaries	A-1; D-1; F-1
#18	MCFD # 18 responds within its current boundaries	D-1; F-1
#15	Shelton Fire Department responds within its city limits	A-1; F-1
#15	Mason County Medic One responds within its Shelton city limits and surrounding rural area	F-1

Key: For each level the type and number should be indicated

Aid-BLS = A
Aid-ILS = B
Aid-ALS = C
Ambulance-BLS = D
Ambulance-ILS = E
Ambulance-ALS = F

The Hood Canal naturally divides Mason County creating longer response and travel time to healthcare facilities. Several Highway 101 mud slides effectively cut-off north Mason County from south Mason County allowing for only one lane of travel in that area. During complete closures a unit is manned by a Mason County Medic One ALS Paramedic on the north side of the slide in Mason County at Eldon. Airlift or Army MAST helicopter assists with air transport services.

Mason County Fire District #1 is located on the western shore of Hood Canal and follows along the shoreline. Mason County Fire District #1 provides BLS response only. Mason County Medic One provides ALS.

Mason County Fire District #2, which is located in the northeast portion of the county, also shares a boundary line with Kitsap County Fire District #7. The two districts often provide mutual aid when necessary. Mason County Fire District #2 provides ALS services with three Paramedic units.

Mason County Fire District #3 borders Mason County Fire District #5 on three sides. It provides BLS transportation manned by volunteers and one ambulance. Mason County Fire District #5 provides ALS services.
Mason County Fire District #4 is located south of the City of Shelton and its southern boundary abuts with Thurston County. This agency provides BLS response only. Mason County Medic One provides ALS.

Mason County Fire District #5 is south of Mason County Fire District #2 and has more land area than any other district in the county. Mason County Fire District #5 has been providing ALS longer than any other fire district in the county.

Mason County Fire District #6 is located west of Mason County Fire District #5 at the south end of Hood Canal. It also shares a boundary with Mason County Fire District #9 and provides BLS services. Since January 1, 2001, ALS transport has been provided by Mason County Fire District #5.

Mason County Fire District #8 provides BLS response only. ALS is provided through a contract with Mason County Fire Districts #2.

Mason County Fire District #9 is located west of Mason County Fire District #6 and south of Mason County Fire District #1. Mason County Fire District #9 provides BLS response only. Mason County Medic One provides ALS service.

Mason County Fire District #11 is located northwest of the City of Shelton and shares a boundary with Shelton Fire Department. Mason County Medic One provides ALS.

Mason County Fire District #12 is located west of Mason County Fire Districts #13 and 16 and shares a western boundary with Grays Harbor County. Mason County Medic One provides ALS.

Mason County Fire District #13 is located just south of Mason County Fire District #16 and shares a boundary on the south with Thurston County. This district provides BLS response only. Mason County Medic One provides ALS.

Mason County Fire District #16 is located west of the City of Shelton. Mason County Medic One provides ALS.

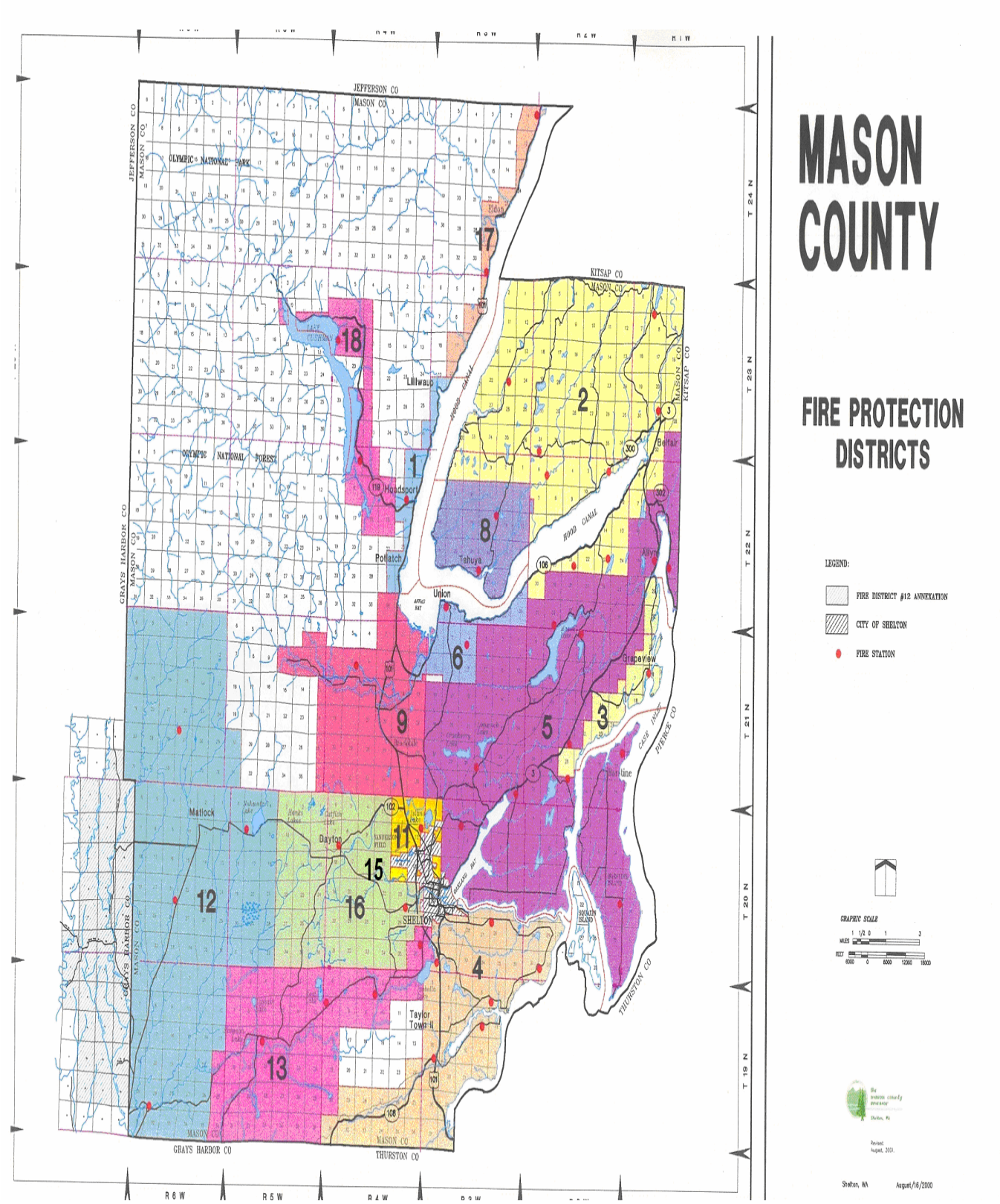
Mason County Fire District #17 is located north of Mason County Fire District #1 and shares a north boundary with Jefferson County. Mason County Fire District #17 provides BLS response only. Mason County Medic One provides ALS.

Mason County Fire District #18 is located just west of Mason County Fire District # 1 and located around Lake Cushman. This agency became a BLS transport agency during 2000 and provides BLS response and transport. Mason County Medic One provides ALS.

The City of Shelton located in the southeast portion of the county provides BLS services and Mason County Medic One provides ALS services.

Currently all entities within Mason County are verified licensed agencies. Projections show that within the next three to five years an increase demand due to population growth will require that all aid services become BLS ambulance services.

Mason County - Trauma Response Area Map



2. Need Statement
Mason County needs to continue to be able to maintain coverage when units are out of the area or otherwise disposed.

3. Goals

Goal 1: Local EMS Councils and EMS provider agencies are supported in maintaining and improving emergency services within their community.

Objective 1: Involve Local EMS Council and EMS provider agencies in overall regional system planning, projects and operations quarterly at regional council meetings.

Strategies:

Strategy 1: Encourage local Recruitment and Retention programs.

Strategy 2: Report all Prehospital EMS Training.

Strategy 3: Encourage participation in WA State DOH EMS data collection project.

Strategy 4: Identify & Coordinate Communication resources.

Strategy 5: Participate in the Hood Canal Impact Project.

Strategy 6: Encourage Local County EMS Council to reevaluate distribution of services in order to ensure adequate coverage.

Projected Costs
Projected costs are not available.

Critical Barriers
Funding and Council members' time constraints.

E. Patient Care Procedures and County Operating Procedures

1. System Status:

Northwest Region Patient Care Procedures illustrate how and when to activate the Trauma System. The objective of the EMS & Trauma System is to treat and transport patients to the appropriate medical receiving facility in an expedient manner.

Field triage or sorting of trauma patients may be accomplished using Prehospital Trauma Triage (Destination) Procedure also know as the "Trauma Triage Tool". The "Trauma Triage Tool" is a systematic approach to patient assessment for rapid identification of major trauma and determination of level of care required for the patient. The major trauma patient is considered at high risk for morbidity and mortality thus should be taken to the highest level care facility (Level I or II) within 30 minutes transport time by either ground or air.

Northwest Region Patient Care Procedures are available to MPDs, trauma verified agencies, 9-1-1 centers and EMS personnel on the region web site.

Regional Patient Care Protocols have eliminated the need for individual County Operating Procedures in the Northwest Region EMS System.

It has been proven that regional protocols are more beneficial to Northwest Region citizens than individual county protocols/procedures. Patients are routinely transported across county lines for treatment; therefore a universal regional protocol maintains the highest quality of care across county boundaries.

2. Need Statement

Ensure prehospital providers within the Northwest Region are aware of and have access to current Regional Patients Care Procedures.

3. Goals

Goal 1: All providers advised of any changes to the Northwest Region Patient Care Procedures.

Objective 1: Annually review and revise Regional Patients Care Procedures and make an electronic copy available on the Northwest Region web-site.

Strategies

Strategy 1: Post current Northwest Region Patient Care Procedures on our web site located at www.nwrems.org

Strategy 2: Task the Training, Education & Development Committee with annual review and revision.

Strategy 3: Notify agencies of update through the Northwest Region EMS & Trauma Care Council

Projected Costs

Regional Council Cost
The cost of annual review and revision of Regional Patients Care Procedures will be borne by the Northwest Regional EMS and Trauma Care Council through the Training, Education and Development Committee.

Critical Barriers
At this time the Northwest Region is unable to bear the cost of printing and distributing hard copies of the Patient Care Procedures.

F. Multi-County/Inter-Regional Pre-hospital Care

1. System Status

Levels of prehospital care in the Northwest Region vary widely from county to county and within individual counties. Higher levels of service are concentrated in the more highly populated areas. Kitsap County is classified as a suburban to rural county. Clallam, Jefferson and Mason Counties are classified as rural to wilderness counties. Mutual Aid Agreements are in place throughout all of the Northwest Region.

The upcoming Hood Canal Bridge Repair Project has prompted a Project Impact Assessment by the Washington State Department of Transportation and Department of Public Works; the bridge is expected to be closed for approximately four to six weeks. The expected closure of the Hood Canal Bridge affects all of the Northwest Region's county Emergency Medical Services. Planning for the tremendous impact of this loss of a vital thoroughfare has begun.

2. System Need Statement
A regional all hazards plan is needed. Due to the geography of the Northwest Region, patient transportation can be impacted by many factors at any time of the year. Storms not only affect power systems but also cause road/mud slides, fallen tress and/or flooding blocking our roads. Alternate routes and destinations are dependent upon which roads or highways are passable at that particular time. Major accidents occasionally block access on critical thoroughfares for hours. WA DOT and WA State Patrol help keep dispatch centers and by extension EMS agencies, informed of known road closures and hazards.

3. Goal
Goal 1: A comprehensive regional all hazards plan which all public service personnel and agencies can work from.

Objective 1 Coordinate resources across county and regional lines to meet the needs for the Northwest Region to flex its resource capacity as needed through bimonthly All-Hazards meetings.

Strategies

Strategy 1: The Regional Council will coordinate with the Public Health office to include all available stakeholders to explore solutions.

Strategy 2: The Regional Council will coordinate with the Public Health office targeting development of a comprehensive regional contingency plan that can be implemented in unexpected emergent situations.

Strategy 3: The Regional Council will coordinate with the Public Health office combining and collating existing individual emergency plans from Northwest Region Hospitals, EMS Councils, Fire Agencies & local Department of Emergency Management (DEM), with consideration of State DEM, Federal emergency management.

Objective 2: The Northwest Region will continue regular communication between multi-county pre-hospital care provider agencies in our region through attendance at quarterly local council meetings and necessary correspondence.

Strategies

Strategy 1: The Regional office will inform the hospitals and EMS agencies within our region of upcoming meetings.

Strategy 2: The Regional Council will include all available stakeholders to explore solutions to problems.

Strategy 3: The region will utilize their website to convey information to all agencies.

Projected Costs
System Cost
$25,000
Regional Council Cost
$1,000

Critical Barriers
None at this time.

V. Designated Trauma Care Service

1. System Status

Table F. Approved Minimum/Maximum Numbers of Designated Trauma Care Services

LEVEL	STATE APPROVED		CURRENT STATUS
	MIN	MAX	
II	1	1	0
III	2	2	2
IV	2	3	3
V	3	4	0
IIP	0	0	0
IIIP	1	1	0

Table G. Approved Min/Max Numbers for Designated Rehabilitation Trauma Services

LEVEL	STATE APPROVED		CURRENT STATUS
	MIN	MAX	
II	0	0	0
III+	0	0	0

\+ ***There are no restrictions on the number of Level III Rehab Services***

Staffing Levels at Designated Trauma Services as of 1/28/05

HOSPITALS						
	Olympic	***Forks***	***Jefferson***	***Harrison***	***Mason***	**REGION**
LPN	9	3	0	43	14	**69**
RN	195	24	101	539	117	**976**
RT	9	0	5	35	12	**61**
LAB	60	4	11	0	26	**101**
X-RAY	73	6	11	43	28	**161**
TOTALS	***364***	***37***	***128***	***660***	***197***	***1368***

There are five hospitals in the Northwest Region providing emergency healthcare to the public. The five are evenly spaced throughout the region and each has their own catchments area. Each also serves as the area base station respectively. All five are designated trauma centers.

Forks Community Hospital - Forks, Clallam County, is located on the western edge of Clallam County. They also serve part of West Jefferson County. Forks Community Hospital serves as the base station for the EMS System in the Forks and Clallam Bay areas as well as West Jefferson County. Forks Community Hospital is designated as a Level IV Trauma Center. Due to the distance to travel to a higher-level trauma center, most patients are brought to Forks Community Hospital for stabilization and transferring out, weather permitting. There currently is one general surgeon in Forks. He does not specialize in trauma surgery nor is he available 24/7. Therefore, major trauma surgery cases will be transferred. Minor to moderate trauma cases are transferred to Olympic Memorial Hospital in Port Angeles. Major trauma cases are usually airlifted to Harborview. Flight time to Forks Airport from Seattle is forty-three minutes. Then a forty-three minute return flight back to Harborview eliminates the golden hour for patients.

Patient transfers must be well planned since there are no healthcare facilities located between Forks and Port Angeles. There is no one to assist if the patient's condition deteriorates while en route to Port Angeles.

The airfield at Forks does not have Instrument Flight Reading (IFR) capabilities; therefore, air ambulances cannot land in inclement weather. The closest airfield that is IFR is in Port Angeles, which requires an additional ninety minutes of ground transport. Ground ambulances must travel Highway 101which can delay the transport or stop it entirely if there is a problem with the road around the Crescent Lake. These problems range from a tree across the road to a rockslide or ice and snow. Olympic National Park staff maintains the road. It takes time to gather the resources to resolve blocking problems. This can take several hours to days to complete. There are no alternate roads around Crescent Lake without backtracking thirty-five miles and accessing Highway 112, which has a tendency to wash out or also become blocked with downed trees.

Olympic Medical Center- Port Angeles, Clallam County, is located at the north edge of the central part of the county. Olympic Medical Center is designated as a Level III Trauma Center. Olympic Medical Center serves as the base station for the EMS System of central and eastern Clallam County. They have surgical capabilities that Forks Community Hospital does not have, so they receive many patients from Forks. Like Forks Community Hospital, the distance from Seattle means that major trauma patients are brought to Olympic Medical Center for stabilization and then flown to a higher-level trauma center that meets the needs of the patient. Olympic Medical Center has a helicopter-landing pad on its campus, which facilitates the transfer of patients to the helicopter directly from the Emergency Department. If weather conditions are poor, the air ambulance can land at the airport in Port Angeles requiring an additional fifteen minutes for ground transport of the patient to the airfield.

The Coast Guard Air Station in Port Angeles also has IFR and can serve as a safe landing site for the air ambulance during poor weather conditions.

Jefferson Healthcare - Port Townsend, Jefferson County. Jefferson General Hospital has grown into a fully integrated health care system. The word "hospital" no longer describes the umbrella of services that they offer. To more incorporate the total scope of their healthcare system they have adopted a new name. They are now ***Jefferson Healthcare.*** They are a Level IV designated Trauma Center. Jefferson Healthcare serves as medical control for all of East Jefferson County. Jefferson Healthcare is located at the northeast portion of the county. This means that all but the patients originating in Port Townsend must be ground transported from just a few miles to over forty miles over roads that can be closed for a variety of reasons.

Major trauma patients are transferred out to the appropriate hospital in the Seattle area. Jefferson General Hospital has a heliport on the roof of its facility, and this expedites the transfer of patients from the Emergency Department to the air ambulance.

Air flight time from Seattle to Jefferson Healthcare is roughly twenty-five minutes one way under ideal conditions. If the conditions are less than ideal, the patient must be ground transported to Seattle. The airport in Port Townsend is not IFR.

Harrison Hospital - Bremerton, Kitsap County. Harrison Hospital is designated as a Level III Trauma Center. Harrison Hospital is located in Central Kitsap County. Harrison Hospital serves as the base station for the Kitsap County EMS System. Harrison Silverdale, located in Silverdale, provides treatment of women and children, same-day surgery center, 24-hour emergency care and as a rehabilitation service. Harrison South Kitsap, located in Port Orchard, provides urgent care and services by appointment.

It is possible to have an air ambulance on the ground in most of Kitsap County within ten minutes; the exception would be the extreme western edge in the Hood Canal area. This allows for the patient to be at Harborview well within the golden hour provided there is not a prolonged extrication or rescue.

Naval Hospital – Bremerton (NHB) is a relatively small hospital with limited capabilities for acute trauma, emergent surgical, pediatric surgical, vascular, and neuromuscular/spine care. Although NHB has many of the capabilities of a Level III Trauma Center, they are not state designated. NHB services active duty military personnel, their dependents, and retired personnel provided the mechanism of injury or illness is not too severe for the facility. In the event of a regional emergency they will take patients if they have manpower and beds available.

Mason General Hospital - Shelton, Mason County. Mason General Hospital is located in the southeastern portion of the county. Mason General Hospital is designated as a Level IV Trauma Center. Mason General Hospital serves as the base station hospital for all of Mason County.

Mason General Hospital has surgeons who treat all but the major trauma patients. Major trauma patients are either brought to Mason General Hospital for stabilization and then airlifted out or flown directly from the field based on the location of the patient and the availability of the air ambulance.

Mason General Hospital has a heliport just outside the Emergency Department, which means the patients are brought directly from the Emergency Department to the waiting helicopter. This is an advantage to the patient.

2. Need Statement

Based on a needs assessment conducted annually and information received from designated trauma facilities, there are no changes recommended for minimum and maximum numbers and levels of designated trauma and trauma rehabilitation services in the Northwest Region.

Many issues are highlighted in the initial information about the hospitals and areas they serve. Hospital staff specialized education and training needed for trauma patient care is the issue that this plan will address. Hospital education and training is almost entirely performed at the individual hospitals in the region. The nursing staff comprises the largest group needing annual training in Continuing Medical Education. Basic Cardiac Life Support (BCLS), Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), Trauma Nursing Care Course (TNCC) and others are the typical training needed every year or every other year. Physician training is accomplished within the professional medical community, although physicians often participate in ACLS and PALS courses. With the heightened national focus on disaster preparedness, a new need for education in this area has emerged. This is also a pre-hospital need.

3. Goals

Goal 1: Open communication with and between designated trauma centers in the Northwest Region resulting in maximizing training resource sharing.

Objective 1: Hold a meeting to discuss joint training for hospital and EMS personnel by June 31, 2006

Strategy 1: Utilize existing Regional Hospital, Pre-hospital, and Bio-terrorism committees to make recommendations on joint training to the Regional Council and DOH through regularly scheduled meetings.

Objective 2: Continue to make available training aids for hospital trauma training classes scheduled and on an as-needed basis.

Strategy 1: The Northwest Region will continue to provide the Laerdal/AHA approved ACLS Heartcode Interactive Computer System for onsite ACLS.

Objective 3: Provide a forum at a variety of region-sponsored meetings, including the TED committee meetings (quarterly), Regional Council meetings (bimonthly September-May and in summer if necessary), QI Committee meetings (held directly before Regional Council meetings), Protocol Committee meetings (monthly as necessary), Hospital All-Hazards meetings (bimonthly), Hood Canal Bridge closure meetings (as necessary), and Regional MPD meetings (annually) for communication and information regarding training and CME needs and post training calendars on region website quarterly

Strategy 1: Provide announcements of regional training classes on our website so hospital personnel can participate.

Projected Cost
System Cost
The system cost is the region cost plus innumerable in-kind wages.

Region Cost
$8,000 Staff time and $25,000 in training aids.

Critical Barriers
Lack of funding.

VI. EMS And Trauma System Evaluation

A. Information Management

1. System Status

A statewide EMS data collection system will be an invaluable tool in quality control and EMS system advancement. The Northwest Region is actively involved in WEMSIS, formerly Data Registry TAC, attending all meetings as "Interested Parties". The Northwest Region staff updates the Regional Committee and Local Committees keeping them involved in the planning and courting stakeholders, sometimes encountering resistance to the project.

There are currently 32 agencies using electronic data reporting in the Northwest Region. There are a several different programs being used, but well over half are using Sunpro or Firepoint. All dispatch centers within the region record run times.

All providers in the Northwest Region use the State of Washington's trauma triage tool to activate the trauma system, thereby choosing the correct receiving trauma service. The appropriate data is then submitted to the receiving facility.

2. Need Statement

Many of the possible stakeholders do not immediately see the value of the WEMSIS program and need convincing to participate.

3. Goals

Goal 1: All agencies in the Northwest Region are 100% compliant in reporting to WEMSIS.

Objective 1: Implement a comprehensive EMS data collection system by January, 2012.

Strategy 1: Continue attending all WEMSIS planning meetings and informing Regional and Local councils of advancement in planning.

Strategy 2: The Northwest Region will co-host, with the North Region, a WEMSIS conference in October.

Projected Cost

System Cost

Unable to calculate a total Data collection system cost at this time.

Regional Council Cost

A WEMSIS conference, and Regional staff costs and mileage reimbursements.

Critical Barriers

The largest hurdle we will face is convincing the stakeholders of the WEMSIS systems value before it is implemented.

B. Quality Assurance

1. System Status

Each county within the region has an effective pre-hospital and hospital peer review and/or evaluation program. Case reviews are discussed at the appropriate committee level and then problems or accolades are referred to the MPD and/or county pre-hospital Quality Improvement (QI) Coordinator when applicable. A Northwest Region QI Committee was developed in 1997 and a Northwest Region QI Plan was completed and submitted to DOH in June of l997. This committee's membership consists of representatives from each hospital located in the region, prehospital representatives from county agencies; MPD's and lay persons involved within the EMS system. The Northwest Region QI Committee meets prior to Northwest Region EMS Council meetings to review prehospital and hospital cases. Historically reviews have been case-based QI, however, during this upcoming biennium we will incorporate overall system performance. Committee members also attend an annual conference. Case reviews and guest speakers are included on the conference agenda and both case and system level QI are addressed.

2. Needs Statement

Our current issues include unstable participation at our QI meetings by some key EMS individuals.

3. Goals

Goal 1: Regional EMS and trauma system evaluation is using "outside the box thinking" by effectively using available information from our data to improve the quality of care in our EMS system.

Objective 1: Increase participation at the regional QI meetings and conferences by sending annual QI calendar to all members of QI committee at beginning of the fiscal year 2006. QI calendar will also be in the Regional Packet at the September 2005 Regional Council meeting.

Strategies

Strategy 1: Assist in identifying why members are not attending.

Strategy 2: Identify opportunities for new membership.

Strategy 3: Publicizing our meetings in advance to ensure participation.

Strategy 4: Continue to utilize the best possible speakers at our annual QI conference to increase our participant's knowledge and skill.

Projected Cost

System Cost
Unable to calculate system QI cost.

Regional Council Cost
$3,000 for QI conference

Critical Barriers

None at this time.

VII. All Hazards Preparedness

A. Prehospital Preparedness

1. System Status

The Northwest Region has established a working relationship with our health service entities including; Pre-hospital, Hospital, Public Health Jurisdictions, Military Hospital, US Coast Guard and Emergency Management organizations. These relationships have grown over the years as events develop for example the Hood Canal Bridge Closure Project Planning. At this time a working momentum has developed by bringing all parties together regularly at Regional Council meetings and all hazards planning meetings. Northwest Region EMS personnel also attend planning meetings hosted by these same agencies. This has prevented much redundancy and saved innumerable dollars for all parties involved.

Drills and exercises conducted within Hospital Region 2 are combined and planned together as much as possible to meet contractual deliverables required by all agencies: Pre-hospital, Hospital, Public Health Jurisdictions, Military Hospital, US Coast Guard and Emergency Management organizations. Through planning and executing the drills and exercises together our entire system infrastructure and response has improved greatly.

The Northwest Region EMS & Trauma Care Council holds full council meetings every other month. All health service entities named above are invited to attend and have a representative from their organization appointed to the regional council.

Pre-hospital EMS agencies routinely maintain a back stock of supplies and equipment. In the event of a catastrophic disaster individual agencies will look to the local, state and federal department of emergency management and the national pharmaceutical stockpile for support.

WMD Awareness training for first responders is well underway. WMD awareness components have been integrated into the Ongoing Training and Evaluation Program curriculum. As additional approved web based training becomes available that information will be disseminated to all agencies.

Throughout the Northwest Region mutual aid agreements are in place for inter-agency assistance and inter-county response in accordance with the State Mobilization Plan.

As in all areas of the state an event producing 50 severely burned patients will rapidly overwhelm the initial responders on scene. However, our region has regional protocols; therefore outside agencies arriving at the event will already be operating on the same triage, treatment and patient destination protocol. Mass Casualty Incident preparedness drills/exercises are held annually in each county. These drills are a cooperative effort between Fire, EMS, DEM, Public Health, Military, Hospitals and others.

Pediatric patient care protocols are well established. Currently the nearest pediatric specialty hospitals are Harborview Medical Center which is a Pediatric Level I Trauma Center, Marybridge Children's Hospital (Pediatric Level II Trauma Center) located in Tacoma WA, and Seattle Children's Hospital and Regional Medical Center. These facilities are accessible by ground and/or air transport. All of the Northwest region's local hospitals have Pediatricians on staff and support from the local pediatricians.

Interoperability equipment agreements exist between emergency response agencies, hospitals, and Departments of Emergency Management.

EMS services are dispatched by a number of Dispatch Centers throughout the Northwest Region due to distance, terrain and county configurations. Each county has their own established operation frequencies. These Frequencies allow for communication between Pre-hospital units, hospitals and the communication center. EMS units contacting base hospitals, primarily utilize either HEAR radio or direct land-line communications. If multiple county jurisdictions are involved in an incident, there are alternate operating frequencies. The ability of multiple agencies and other public and private agencies to communicate with other jurisdictions is accomplished through designated frequencies or the statewide LEARN channel, HEAR or HAM radios. Hospital communications can be accomplished through HEAR frequency, MEDNET channels, landline, cellular phones and satellite telephones.

The Northwest Region providers currently operate under regional protocols, providing universal care. During this biennial the protocols are being revised and updated. A new "Response to Unusual Catastrophic Events" section will be added. This section will specifically address all hazard responses including; WMD and Mass Casualty Incidents.

2. System Need Statement

Communications as always is the Achilles Heel of all disaster response and needs substantial improvement.

Initial awareness training is well underway throughout the Northwest Region. Tactical and Practical application training needs require further development. Searches across the United States have turned up a variety of programs available for purchase however; it has not been made clear what programs will be WA State DOH approved.

Each agency has prepared a WMD equipment needs list and has submitted that list to the Department of homeland security.

The Northwest Region EMS office is currently working to compile an updated list of all standing mutual aid agreements from the region's first response agencies and hospitals.

Drills and exercises conducted within Hospital Region 2 are combined and planned together as much as possible to meet deliverables required by all agencies. Through planning and executing the drills and exercises together our entire system infrastructure and response has improved greatly.

As in all areas of the state an event producing 50 severely burned patients will rapidly overwhelm the initial responders on scene. However, our region has regional protocols; therefore outside agencies arriving at the event will already be operating on the same triage, treatment and patient destination protocol.

3. Goals

Goal 1: Coordination and leadership in Regional Hospital preparedness activities in cooperation with Regional EMS & Trauma Care councils.

Objective 1: Provide a format for an organized and cohesive Regional response to all hazards by annually updating the Region 2 Hospital Preparedness Plan.

Goal 2: Update the Region 2 Hospital Emergency Preparedness Response Plan.

Objective 1: Update the Region 2 hospital Emergency Preparedness plan annually in coordination with the Office of Public Health.

Goal 3: Identify current pre-hospital and hospital capabilities and needs that must be addressed in order to meet the goal of providing trauma and burn care to at least 50 severely injured adult and pediatric patients per million of population.

Objective 1: Working in coordination with the Office of Public Health, local councils and agencies develop burn plan to be included in the 2006 revision of the All-Hazards Preparedness Plan.

Strategies

Strategy 1: Continue coordination and collaboration with public health, hospital and local EMS.

Projected Cost
System Cost
Unable to calculate system all hazard response cost.
Regional Council Cost
$45,000

Critical Barriers
None

B. Hospital Preparedness

1. System Status (Region):
The Northwest Region has established a working relationship with our health service entities including; Pre-hospital, Hospital, Public Health Jurisdictions, Military Hospital, US Coast Guard and Emergency Management organizations. These relationships have grown over the years as events develop for example the Hood Canal Bridge Closure Project Planning. At this time a working momentum has developed by bringing all parties together regularly at Regional Council meetings and all hazards planning meetings. Northwest Region EMS personnel also attend planning meetings hosted by these same agencies. This has prevented much redundancy and saved innumerable dollars for all parties involved.

Drills and exercises conducted within Hospital Region 2 are combined and planned together as much as possible to meet deliverables required by all agencies: Pre-hospital, Hospital, Public Health Jurisdictions, Military Hospital, US Coast Guard and Emergency Management organizations. Through planning and executing the drills and exercises together our entire system infrastructure and response has improved greatly.

The Northwest Region EMS & Trauma Care Council holds full council meetings every other month. All health service entities named above are invited to attend and have a representative from their organization appointed to the regional council.

Pre-hospital EMS agencies routinely maintain a back stock of supplies and equipment. In the event of a catastrophic disaster individual agencies will look to the local, state and federal department of emergency management and the national pharmaceutical stockpile for support.

Region 2's Hospital Plan was developed with input from hospitals, Public Health and Department's of Emergency Management from within the region. The Plan has undergone one review and revision and is currently under another review. Revisions will be made through an on-going process using a change form process that is included in the appendices of the current Plan.

2. System Need Statement
Communication is the largest problem in disaster response in the region, and needs to be improved.

Identification and prioritization of an individual hospital's needs list that will allow enhancement in both their facility and regional capacity to respond to a public health emergency is needed.

3. Goals

Goal 1: Coordination and leadership in Regional Hospital preparedness activities in cooperation with Regional EMS & Trauma Care council.

Objective 1: Provide a forum for development of an organized and cohesive Regional response to all hazards

Strategies

Strategy 1: Host planning and preparedness meetings with participating hospitals, public health and emergency response partners to continue regional hospital planning, identify funding priorities which will enable them to meet the requirements of regional hospital preparedness and response..

Strategy 2: Work collaboratively with the Office of EMS and Trauma Systems, DOH PEPR representatives, our public health regional lead agency, local public health jurisdictions, hospitals and emergency response agencies within Region 2 to meet HRSA benchmarks

Objective 2: The Regional Hospital Emergency Preparedness Response Plan is annually updated.

Goal 2: Pre-hospital and hospital capabilities and needs are identified and addressed in order to meet the need to provide trauma and burn care to at least 50 severely burn injured adult and pediatric patients per million of population.

Objective 1:

Projected Cost
System Cost
Estimated costs are not available at this time.
Regional Council Cost
$45,000

Critical Barriers
None

Appendices

Appendix 1 – Trauma Verification Worksheet & Status Change Request

ATTACHMENT 2
July 2005-June 2007
Biennial Plan Format

Washington State Department of Health
Trauma Verification Worksheet

Min/Max Numbers for Trauma Verified Prehospital Services

Northwest Region **Jefferson County** **2005-07 Regional Plan** **05/16/2005**

Service Type/Level	STATE APPROVED		CURRENT STATUS	REGION PROPOSED CHANGE Reference changes with footnotes identifying in which trauma response area the increase in service is being recommended	
	MIN	MAX		MIN	MAX
Aid - BLS	1	2	1	1	2
Aid - ILS	0	1	0	0	1
Aid - ALS	0	0	0	0	0
Amb-BLS	5	5	4	5	5
Amb - ILS	1	2	0	1	2
Amb - ALS	2	2	2	2	3*

*Port Townsend Fire Department is requesting a change from BLS Ambulance to ALS ambulance. Attachment 4 – DOH Criteria for Establishing Need & Distribution of Trauma Verified Prehospital Services has been completed.

Attachment 4

Request to change ambulance licensure/verification status for the City of Port Townsend from BLS to ALS

The City of Port Townsend Fire Department has been providing an ALS service since 1990. Due to decisions made at the administrative levels of the Fire Department and City government, ambulance licensure was maintained at the BLS level. We intend to continue to operate paramedic level services, and have expanded our operation from one to two staffed ALS response/transport units.

Our primary coverage area is the political boundary of the City of Port Townsend; located at the north end of the Quimper Peninsula. The City is bordered by Port Townsend Bay, Admiralty Inlet, the eastern reaches of the Strait of Juan de Fuca, and Jefferson Fire District 6. Our secondary response area, by contract, is Jefferson County Fire District 6. The district is bordered by Port Townsend Bay, the City, Discovery Bay, and Jefferson County Fire District 1.

Our average response within the City is four miles. Our average response in the district is eight miles. We have four high-density residential areas that generate a low volume of responses. While these areas are served by non-staffed BLS fire stations, they are remote from our staffed ALS station. They are North Beach to Seaview Estates (8 min), Cape George (8min), Becket Point (12 min), Kala Point (10 min) (response times for medic units from Port Townsend Station).

The next closest ALS resource is a non-transport response unit, which is shared between JCFD1 (Chimacum) and JCFD3 (Port Ludlow). The housing of this unit alternates between these two agencies. Chimacum is 10 miles (12 minutes) away and Port Ludlow is 15 miles (18 minutes) away from the middle of our response area. The next available ALS units are in North Kitsap and Sequim, both 30 miles away.

In the City all responses are at the ALS level, not utilizing any tiered response. In our Fire District 6 contract area, responses are ALS 75% of the time with 25% tiered response. Dispatch services are provided by contract through Jefferson County Sheriff's Office. JCSO dispatchers are currently utilizing King County's dispatch protocols.

As of 2004, we are averaging 4.5 alarms per day, which equates to 1642 alarms per year. We are keeping to the national trend, 80% are EMS and 20% are fire related. 90% of our 1314 EMS responses result in transports. Of our 1183 transports 25% are ALS, 25% are ILS and 50% are BLS. 10% of our EMS alarms are non-emergency interfacility transports.

Our community is host to a vibrant tourism industry which annually adds 323,000 overnight guests to our 11,000 year round population. Fort Worden State Park hosts 175,000 overnight visitors annually. We have 900 transient accommodation beds in town with 45% year round occupancy average.

Our skills maintenance and continuing education consists of a combination of primarily OTEP/PCEP with some traditional CME. Our nine paramedics maintain their IV and ET skills through field application and mannequin practice. We add about two new ILS level technicians every two years and have recently added two new paramedics in their first certification period. These first period technicians are able to meet their IV requirements but the new paramedics are under significant strain to maintain sufficient field intubations. To assist them, a training agreement has been established with Harrison Hospital in Bremerton.

Submitted by: Anice Grant ***Date: January 28, 2005***

Resubmitted ***May 16, 2005***
July 20, 2005

Appendix 2 – Northwest Region Patient Care Procedures

INTRODUCTION

The Northwest Region's Patient Care Procedures are designed to serve as a guide to Medical Program Directors, trauma verified EMS agencies, 9-1-1 centers and EMS personnel as to how and when to activate the Northwest Region's Trauma System. These procedures apply to Clallam, Jefferson, Kitsap and Mason Counties.

The following Regional Patient Care Procedures are intended as an approach toward the rapid treatment of major trauma patients in the Northwest Region.

OBJECTIVE OF THE TRAUMA SYSTEM

The objective of the Northwest Region EMS & Trauma System is to identify and transport patients, based on medical need, to the most appropriate hospital facility in an expedient manner.

Major trauma patients from the following categories are considered at high risk for morbidity and mortality therefore need immediate transfer or transport to the appropriate Level I or Level II trauma center.

Central Nervous System Injuries

Head injury with any of the following:

- Open, penetrating, or depressed skull fracture
- CSF leak
- Severe coma
- Deterioration in Glasgow Coma Score of 2 or more points
- Lateralizing signs
- Unstable spine
- Spinal cord injury

Chest

Suspected great vessel or cardiac injuries

Major chest wall injury

Patient who may require positive pressure ventilation

Pelvis

Pelvic ring disruption with shock requiring more than 5 units transfusion

Evidence of continued hemorrhage

Compound/open pelvic injury with head injury

Multiple System Injury

Severe facial injury with head injury

Chest injury with head injury

Abdominal or pelvic injury with head injury

Burns with head injury

Specialized Problems

Burns over 20 percent of the patient's body surface area involving airway

Carbon monoxide poisoning

Barotrauma

Secondary Deterioration (Late Sequelae)

Patient requiring mechanical ventilation

Sepsis

Organ system(s) failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal or coagulation system(s)

Osteomyelitis

EMTs and/or Paramedics shall use the State of Washington's Prehospital Trauma Triage (Destination) Procedures [Addendum 1] and be knowledgeable of the steps required to activate the Trauma System. In general, major trauma patients who meet the major trauma criteria listed above should be immediately transported or transferred to Harborview Medical Center in Seattle.

ACTIVATION OF TRAUMA SYSTEM

Upon evaluation of the patient(s) and determination of the need for a trauma team, the Paramedic, EMT, or appropriate medical personnel shall contact medical control at the nearest or most appropriate designated trauma center and request the activation of the Trauma System.

Once identified, trauma patients should be banded, treated, transported and trauma data collected as quickly as possible. In all cases, the goal of the Northwest Region Trauma System is to have all trauma patients delivered to the most appropriate medical receiving facility within 60 minutes from the time of arrival of EMS on scene of the trauma incident.

DESIGNATED TRAUMA CENTERS

Washington State Department of Health has designated five trauma centers in the Northwest Region to receive major trauma patients.

Those trauma centers and their designation levels are:

Location	Facility	Level
Clallam County	Forks Community Hospital	IV
	Olympic Medical Center	III
Jefferson County	Jefferson General Hospital	IV
Kitsap County	Harrison Memorial Hospital	III
Mason County	Mason General Hospital	IV

DATA COLLECTION

WAC 246-976-420 Trauma registry -- Department responsibilities. (1) **Purpose:** The department maintains a trauma registry, as required by RCW 70.168.060 and 70.168.090. The purpose of this registry is to:

(a) Provide data for injury surveillance, analysis, and prevention programs;

(b) Monitor and evaluate the outcome of care of major trauma patients, in support of statewide and regional quality assurance and system evaluation activities;

(c) Assess compliance with state standards for trauma care;

(d) Provide information for resource planning, system design and management;

(e) Provide a resource for research and education.

(2) **Confidentiality:** It is essential for the department to protect information regarding specific patients and providers. Data elements related to the identification of individual patient's, provider's, and facility's care outcomes shall be confidential, shall be exempt from RCW 42.17.250 through 42.17.450, and shall not be subject to discovery by subpoena or admissible as evidence.

(a) The department may release confidential information from the trauma registry in compliance with applicable laws and regulations. No other person may release confidential information from the trauma registry without express written permission from the department.

(b) The department may approve requests for trauma registry data from qualified agencies or individuals, consistent with applicable statutes and rules. The department may charge reasonable costs associated with such requests.

(c) The data elements indicated as confidential in Tables E, F and G below are considered confidential.

(d) The department will establish criteria defining situations in which additional registry information is confidential, in order to protect confidentiality for patients, providers, and facilities.

(e) This paragraph does not limit access to confidential data by approved regional quality assurance programs established under chapter 70.168 RCW and described in WAC 246-976-910.

(3) **Inclusion criteria:**

(a) The department will establish inclusion criteria to identify those injured patients that designated trauma services must report to the trauma registry.

These criteria will include:

(i) All patients who were discharged with ICD diagnosis codes of 800.0 - 904.99, 910 - 959.9 (injuries), 994.1 (drowning), 994.7 (asphyxiation), or 994.8 (electrocution) and:

(A) For whom the hospital trauma resuscitation team was activated; or

(B) Who were dead on arrival at your facility; or

(C) Who were dead at discharge from your facility; or

(D) Who were transferred by ambulance into your facility from another facility; or

(E) Who were transferred by ambulance out of your facility to another acute care facility; or

(F) Adult patients (age fifteen or greater) who were admitted as inpatients to your facility and have a length of stay greater than two days or forty-eight hours; or

(G) Pediatric patients (ages under fifteen years) who were admitted as inpatients to your facility, regardless of length of stay; or

(ii) All patients who meet the requirements of the state of Washington prehospital trauma triage procedures described in WAC 246-976-930(3);

(b) For all licensed rehabilitation services, these criteria will include all patients who were included in the trauma registry for acute care.

(4) **Other data:** The department and regional quality assurance programs may request data from medical examiners and coroners in support of the registry.

(5) **Data linking:** To link data from different sources, the department will establish procedures to assign a unique identifying number (trauma band number) to each trauma patient. All providers reporting to the trauma registry must include this trauma number.

(6) **Data submission:** The department will establish procedures and format for providers to submit data electronically. These will include a mechanism for the reporting agency to check data for validity and completeness before data is sent to the registry.

(7) **Data quality:** The department will establish mechanisms to evaluate the quality of trauma registry data. These mechanisms will include at least:

(a) Detailed protocols for quality control, consistent with the department's most current data quality guidelines.

(b) Validity studies to assess the timeliness, completeness and accuracy of case identification and data collection. The department will report quarterly on the timeliness, accuracy and completeness of data.

(8) **Registry reports:**

(a) Annually, the department will report:

(i) Summary statistics and trends for demographic and related information about trauma care, for the state and for each EMS/TC region;

(ii) Outcome measures, for evaluation of clinical care and system-wide quality assurance and quality improvement programs.

(b) Semiannually, the department will report:

(i) Trends, patient care outcomes, and other data, for each EMS/TC region and for the state, for the purpose of regional evaluation;

(ii) On all patient data entered into the trauma registry during the reporting period;

(iii) Aggregate regional data to the regional EMS/TC council, excluding any confidential or identifying data.

(c) The department will provide:

(i) Provider-specific raw data to the provider that originally submitted it;

(ii) Periodic reports on financial data;

(iii) Registry reports to all providers that have submitted data;

(iv) For the generation of quarterly reports to all providers submitting data to the registry, for the purpose of planning, management, and quality assurance.

WAC 246-976-430 Trauma registry -- Provider responsibilities. (1) Trauma care providers, prehospital and hospital, must place a trauma ID band on trauma patients, if not already in place from another agency.

(2) All trauma care providers must protect the confidentiality of data in their possession and as it is transferred to the department.

(3) All trauma care providers must correct and resubmit records which fail the department's validity tests described in WAC 246-976-420(6). You must send corrected records to the department within three months of notification.

(4) Licensed prehospital services that transport trauma patients must:

(a) Assure personnel use the trauma ID band.

(b) Report data as shown in Table E for trauma patients defined in WAC 246-976-420. Data is to be reported to the receiving facility in an approved format within ten days.

(5) Designated trauma services must:

(a) Assure personnel use the trauma ID band.

(b) Report data elements shown in Table F for all patients defined in WAC 246-976-420.

(c) Report patients discharged in a calendar quarter in an approved format by the end of the following quarter. The department encourages more frequent data reporting.

(6) Designated trauma rehabilitation services must:

(a) Report data on all patients who were included in the trauma registry for acute care.
(b) Report either:
(i) Data elements shown in Table G; or
(ii) If the service submits data to the uniform data set for medical rehabilitation, provide a copy of the data to the department.

Table E: Prehospital Data Elements For The Washington Trauma Registry

Type of patient **Data Element**	**Pre-Hosp Transport**	**Inter-Facility**
Note: **(C)** identifies elements that are confidential. See WAC 246-976-420 (2)(c).		
Incident Information		
Agency identification number **(C)**	X	X
Date of response **(C - day only)**	X	X
Run sheet number **(C)**	X	X
First agency on scene identification number **(C)**	X	
Level of personnel	X	X
Mode of transport	X	X
Incident county code	X	
Incident location (type)	X	
Incident response area type	X	
Patient Information		
Patient's trauma identification band number **(C)**	X	X
Name **(C)**	X	X
Date of birth **(C)**, **or** Age	X	X
Sex	X	X
Mechanism of injury	X	
Safety restraint or device used	X	
Transportation		
Transported from (code) **(C - if hospital ID)**	X	X
Reason for destination decision	X	X
Times		
Transporting agency dispatched	X	X
Transporting agency arrived at scene	X	X
Transporting agency departed from scene	X	X

Vital Signs		
Time	X	X
Systolic blood pressure	X	X
Respiratory rate	X	X
Pulse	X	X
Glasgow coma score (three components)	X	X
Pupils	X	X
Vitals from 1st agency on scene?	X	
Trauma Triage Criteria		
Vital signs, consciousness level	X	
Anatomy of injury	X	
Biomechanics of injury	X	
Other risk factors	X	
Gut feeling of medic	X	
Prehospital trauma system activation?	X	
Other Severity Measures		
Respiratory quality	X	
Consciousness	X	
Time (interval) for extrication	X	
Treatment		
EMS interventions	X	X

Table F: Hospital Data Elements for the Washington Trauma Registry

All licensed hospitals must submit the following data for patients identified in WAC 246-976-420(3): Note: **(C)** identifies elements that are confidential. See WAC 246-976-420(2).

Record Identification

Identification of reporting facility **(C)**;
Date and time of arrival at reporting facility **(C - day only)**;
Unique patient identification number assigned to the patient by the reporting facility **(C)**;
Patient's trauma identification band number **(C)**;

Patient Identification

Name **(C)**;
Date of birth **(C - day only)**;
Sex;
Race;
Social Security number **(C)**;
Home zip code;

Prehospital Incident Information
- Date and time of incident **(C - day only)**;
- Prehospital trauma system activated?;
- First agency on-scene ID number;
- Arrival via EMS system?;
- Transporting (reporting) agency ID number;
- Transporting agency run number **(C)**;
- Mechanism of injury;
- Respiratory quality;
- Consciousness;
- Incident county code;
- Incident location type;
- Response area type;
- Occupational injury?;
- Safety restraint/device used;

Earliest Available Prehospital Vital Signs
- Time;
- Systolic blood pressure;
- Respiratory rate;
- Pulse rate;
- Glasgow coma score (three components);
- Pupils;
- Vitals from 1st on-scene agency?;

Extrication time over twenty minutes?;
Prehospital procedures performed;
Prehospital Triage
- Vital signs/consciousness;
- Anatomy of injury;
- Biomechanics of injury;
- Other risk factors;
- Gut feeling of medic;

Transportation Information
Time transporting agency dispatched;
- Time transporting agency arrived at scene;
- Time transporting agency left scene;
- Transportation mode;
- Personnel level;
- Transported from;
- Reason for destination;

ED or Admitting Information
- Time ED physician called;
- ED physician called "code"?;
- Time ED physician available for patient care;
- Time trauma team activated;
- Level of trauma team activation;
- Time trauma surgeon called;
- Time trauma surgeon available for patient care;
- Vital Signs in ED
  - Patient dead on arrival at your facility?;
  - First and last systolic blood pressure;

First and last temperature;
First and last pulse rate;
First and last spontaneous respiration rate;
Lowest systolic blood pressure;
Glasgow coma scores (eye, verbal, motor);
Injury Severity scores
Prehospital Index (PHI) score;
Revised Trauma Score (RTS) on admission;
For pediatric patients:
Pediatric Trauma Score (PTS) on admission;
Pediatric Risk of Mortality (PRISM) score on admission;
Pediatric Risk of Mortality - Probability of Survival (PRISM P(s));
Pediatric Overall Performance Category (POPC);
Pediatric Cerebral Performance Category (PCPC):
ED procedures performed;
ED complications;
Time of ED discharge;
ED discharge disposition, including
If admitted, the admitting service;
If transferred out, ID of receiving hospital

Diagnostic and Consultative Information

Date and time of head CT scan;
Date of physical therapy consult;
Date of rehabilitation consult;
Blood alcohol content;
Toxicology screen results;
Drugs found;
Co-morbid factors/Preexisting conditions;

Surgical Information

For the first operation:
Date and time patient arrived in operating room;
Date and time operation started;
OR procedure codes;
For later operations:
Date of operation
OR Procedure Codes

Critical Care Unit Information

Date and time of admission for primary stay in critical care unit;
Date and time of discharge from primary stay in critical care unit;
Length of readmission stay(s) in critical care unit;

Other procedures performed (not in OR)

Discharge Status

Date and time of facility discharge **(C - day only)**;
Most recent ICD diagnosis codes/discharge codes, including nontrauma codes;
E-codes, primary and secondary;
Glasgow Score at discharge;
Disability at discharge (Feeding/Locomotion/Expression)

Discharge disposition

If transferred out, ID of facility patient was transferred to **(C)**
If patient died in your facility

Date and time of death **(C - day only)**;
Was an autopsy done?;
Was case referred to coroner or medical examiner?
Did coroner or medical examiner accept jurisdiction?
Was patient evaluated for organ donation?

Financial Information (All Confidential)

For each patient
Total billed charges;
Payer sources (by category);
Reimbursement received (by payer category);
Annually, submit ratio-of-costs-to-charges, by department.

Table G: Data Elements for Designated Rehabilitation Services

Designated trauma rehabilitation services must submit the following data for patients identified in WAC 246-976-420(3).
Note: **(C)** identifies elements that are confidential. WAC 246-976-420(2)

Rehabilitation services, Levels I and II

Patient Information

Facility ID **(C)**
Facility Code
Patient Code
Trauma tag/identification Number **(C)**
Date of Birth **(C - day only)**
Social Security Number **(C)**
Patient Name **(C)**
Patient Sex

Care Information

Date of Admission **(C - day only)**
Admission Class
Date of Discharge **(C - day only)**
Impairment Group Code
ASIA Impairment Scale

Diagnosis (ICD-9) Codes

Etiologic Diagnosis
Other significant diagnoses
Complications/comorbidities
Diagnosis for transfer or death

Other Information

Date of onset
Admit from (Type of facility)
Admit from (ID of facility)
Acute trauma care by (ID of facility)
Prehospital living setting
Prehospital vocational category
Discharge-to-living setting

Functional Independence Measure (FIM) - One set on admission and one on discharge

Self Care
Eating
Grooming

Bathing
Dressing - Upper
Dressing - Lower
Toileting
Sphincter control
Bladder
Bowel
Transfers
Bed/chair/wheelchair
Toilet
Tub/shower
Locomotion
Walk/wheelchair
Stairs
Communication
Comprehension
Expression
Social cognition
Social interaction
Problem solving
Memory

Payment Information (all confidential)
Payer source - primary and secondary
Total Charges
Remitted reimbursement by category

Rehabilitation, Level III

Patient Information
Facility ID **(C)**
Patient number **(C)**
Trauma tag/identification Number **(C)**
Social Security Number **(C)**
Patient Name **(C)**

Care Information
Date of Admission **(C - day only)**

Impairment Group Code

Diagnosis (ICD-9) Codes
Etiologic Diagnosis
Other significant diagnoses
Complications/co-morbidities

Other Information
Admit from (Type of facility)
Admit from (ID of facility) **(C)**
Acute trauma care given by (ID of facility) **(C)**
Inpatient trauma rehabilitation given by (ID of facility) **(C)**
Discharge-to-living setting

Payment Information (all confidential)

Payer source - primary and secondary
Total Charges
Remitted reimbursement by category

Data shall arrive at the DOH registry in an approved format no later than ninety days after the end of the quarter.

DEFINITIONS

WAC 246-976-010 Definitions. Definitions in RCW 18.71.200, 18.71.205, 18.73.030, and 70.168.015 apply to this chapter. In addition, unless the context plainly requires a different meaning, the following words and phrases used in this chapter mean:

"ACLS" means advanced cardiac life support, a course developed by the American Heart Association.

"Activation of the trauma system" means mobilizing resources to care for a trauma patient in accordance with regional patient care procedures. When the prehospital provider identifies a major trauma patient, using approved prehospital trauma triage procedures, he or she notifies both dispatch and medical control from the field.

"Adolescence" means the period of physical and psychological development from the onset of puberty to maturity, approximately twelve to eighteen years of age.

"Advanced first aid," for the purposes of RCW 18.73.120, 18.73.150, and 18.73.170, means a course of at least twenty-four hours of instruction, which includes at least:

- CPR;
- Airway management;
- Trauma/wound care;
- Immobilization.

"Agency response time" means the interval from agency notification to arrival on the scene. It is the combination of activation and enroute times defined under system response times in this section.

"Aid service" means an agency licensed by the department to operate one or more aid vehicles, consistent with regional and state plans.

"Airway technician" means a person who:

- Has been trained in an approved program to perform endotracheal airway management and other authorized aids to ventilation under written or oral authorization of an MPD or approved physician delegate; and
- Has been examined and certified as an airway technician by the department or by the University of Washington's school of medicine.

"ALS" means advanced life support.

"Ambulance service" means an agency licensed by the department to operate one or more ground or air ambulances. Ground ambulance service operation must be consistent with regional and state plans. Air ambulance service operation must be consistent with the state plan.

"Approved" means approved by the department of health.

"ATLS" means advanced trauma life support, a course developed by the American College of Surgeons.

"Attending surgeon" means a physician who is board-certified or board-qualified in general surgery, and who has surgical privileges delineated by the facility's medical staff. The attending surgeon is responsible for care of the trauma patient, participates in all major therapeutic decisions, and is present during operative procedures.

"Available" for designated trauma services described in WAC 246-976-485 through 246-976-890 means physically present in the facility and able to deliver care to the patient within the time specified. If no time is specified, the equipment or personnel must be available as reasonable and appropriate for the needs of the patient.

"BLS" means basic life support.

"Basic life support" means emergency medical services requiring basic medical treatment skills as defined in chapter 18.73 RCW.

"Board certified" means that a physician has been certified by the appropriate specialty board recognized by the American Board of Medical Specialties. For the purposes of this chapter, references to "board certified" include physicians who are board-qualified.

"Board-qualified" means physicians who have graduated less than five years previously from a residency program accredited for the appropriate specialty by the accreditation council for graduate medical education.

"BP" means blood pressure.

"Certification" means the department recognizes that an individual has met predetermined qualifications, and authorizes the individual to perform certain procedures.

"CME" means continuing medical education.

"Consumer" means an individual who is not associated with the EMS/TC system, either for pay or as a volunteer, except for service on the steering committee, licensing and certification committee, or regional or local EMS/TC councils.

"Continuing medical education (CME)" means ongoing education after initial certification to maintain and enhance skill and knowledge.

"CPR" means cardiopulmonary resuscitation.

"Dispatch" means to identify and direct an emergency response unit to an incident location.

"E-code" means external cause code, an etiology included in the International Classification of Diseases (ICD).

"ED" means emergency department.

"Emergency medical services and trauma care (EMS/TC) system" means an organized approach to providing personnel, facilities, and equipment for effective and coordinated medical treatment of patients with a medical emergency or injury requiring immediate medical or surgical intervention to prevent death or disability. The emergency medical service and trauma care system includes prevention activities, prehospital care, hospital care, and rehabilitation.

"EMS" means emergency medical services.

"EMS/TC" means emergency medical services and trauma care.

"EMT" means emergency medical technician.

"General surgeon" means a licensed physician who has completed a residency program in surgery and who has surgical privileges delineated by the facility.

"ICD" means the international classification of diseases, a coding system developed by the World Health Organization.

"ILS" means intermediate life support.

"Injury prevention" means any combination of educational, legislative, enforcement, engineering and emergency response initiatives used to reduce the number and severity of injuries.

"Interfacility transport" means medical transport of a patient between recognized medical treatment facilities requested by a licensed health care provider.

"Intermediate life support (ILS) technician" means a person who:

• Has been trained in an approved program to perform specific phases of advanced cardiac and trauma life support as specified in this chapter, under written or oral direction of an MPD or approved physician delegate; and

• Has been examined and certified as an ILS technician by the department or by the University of Washington's school of medicine.

"Intravenous therapy technician" means a person who:

• Has been trained in an approved program to initiate IV access and administer intravenous solutions under written or oral authorization of an MPD or approved physician delegate; and

• Has been examined and certified as an intravenous therapy technician by the department or by the University of Washington's school of medicine.

"IV" means intravenous.

"Licensing and certification committee (L&C committee)" means the emergency medical services licensing and certification advisory committee created by RCW 18.73.040.

"Local council" means a local EMS/TC council authorized by RCW 70.168.120(1).

"Local medical community" means the organized local medical society existing in a county or counties; or in the absence of an organized medical society, majority physician consensus in the county or counties.

"Medical control" means MPD authority to direct the medical care provided by certified EMS personnel in the prehospital EMS system.

"Medical control agreement" means a written agreement between two or more MPDs, using similar protocols that are consistent with regional plans, to assure continuity of patient care between counties, and to facilitate assistance.

"MPD" means medical program director.

"Must" means shall.

"Ongoing training and evaluation" (OTEP) means a course of education authorized for first responders and EMTs in RCW 18.73.081 (3)(b).

"PALS" means pediatric advanced life support, a course developed by the American Heart Association.

"Paramedic" means a person who:

• Has been trained in an approved program to perform all phases of prehospital emergency medical care, including advanced life support, under written or oral authorization of an MPD or approved physician delegate; and

• Has been examined and certified as a paramedic by the department or by the University of Washington's school of medicine.

"Physician" means an individual licensed under the provisions of chapters 18.71 or 18.57 RCW.

"Practical examination" means a test conducted in an initial course, or a test or series of evaluations during a recertification period, to determine competence in each of the practical skills specified by the department.

"Prehospital agencies" means providers of prehospital care or interfacility ambulance transport.

"Prehospital index" means a scoring system used to activate a hospital trauma resuscitation team.

"Prehospital patient care protocols" means the written procedures adopted by the MPD under RCW 18.73.030(13) and70.168.015 (26) which direct the out-of-hospital emergency care of the emergency patient which includes the trauma care patient. These protocols are related only to delivery and documentation of direct patient treatment.

"Prehospital trauma care services" means agencies that are verified to provide prehospital trauma care.

"Prehospital trauma triage procedures" means the method used by prehospital providers to evaluate injured patients and determine whether to activate the trauma system from the field. It is described in WAC 246-976-930(2).

"Public education" means education of the population at large, targeted groups or individuals, in preventive measures and efforts to alter specific injury-related behaviors.

"Quality assurance (QA)" means an organized quality assessment and improvement program to audit and evaluate care provided in EMS/TC systems, with the goal of improving patient outcomes.

"Regional council" means the regional EMS/TC council established by RCW 70.168.100.

"Regional patient care procedures (RPCP)" means procedures adopted by a regional council under RCW 18.73.030(14) and70.168.015 (23), and approved by the department. Regional patient care procedures do not relate to direct patient care.

"Regional plan" means the plan defined in WAC 246-976-960 (1)(b) that has been approved by the department.

"Registered nurse" means an individual licensed under the provisions of chapter 18.79 RCW.

"Response area" means a service coverage zone identified in an approved regional plan.

"Rural" means unincorporated or incorporated areas with total populations less than ten thousand people, or with a population density of less than one thousand people per square mile.

"Senior EMT instructor (SEI)" means an individual approved to be responsible for the quality of instruction and the conduct of basic life support training courses.

"Special competence" means that an individual has been deemed competent and committed to a medical specialty area with documented training, board certification and/or experience, which has been reviewed and accepted as evidence of a practitioner's expertise:

- For physicians, by the facility's medical staff;
- For registered nurses, by the facility's department of nursing;
- For physician assistants and advanced registered nurse practitioners, as defined in the facility's bylaws.

"Specialized training" means approved training of certified EMS personnel to use a skill, technique, or equipment that is not included in the standard course curriculum.

"State plan" means the emergency medical services and trauma care system plan described in RCW 70.168.015(7), adopted by the department under RCW 70.168.060(10).

"Steering committee" means the EMS/TC steering committee created by RCW 70.168.020.

"Suburban" means an incorporated or unincorporated area with a population of ten thousand to twenty-nine thousand nine hundred ninety nine or any area with a population density of one thousand to two thousand people per square mile.

"System response time" for trauma means the interval from discovery of an injury until the patient arrives at a designated trauma facility. It includes:

"Discovery time": The interval from injury to discovery of the injury;

"System access time": The interval from discovery to call received;

"911 time": The interval from call received to dispatch notified, including the time it takes the call answerer to:

- Process the call, including citizen interview; and
- Give the information to the dispatcher;

"Dispatch time": The interval from call received by the dispatcher to agency notification;

- **"Activation time":** The interval from agency notification to start of response;
- **"Enroute time":** The interval from the end of activation time to the beginning of on-scene time;
- **"Patient access time":** The interval from the end of enroute time to the beginning of patient care;
- **"On scene time":** The interval from arrival at the scene to departure from the scene. This includes extrication, resuscitation, treatment, and loading;
- **"Transport time":** The interval from leaving the scene to arrival at a health care facility;

"Training agency" means an organization or individual that is approved to be responsible for specified aspects of training of EMS personnel.

"Training physician" means a physician delegated by the MPD and approved by the department to be responsible for specified aspects of training of EMS personnel.

"Trauma rehabilitation coordinator" means a person designated to facilitate early rehabilitation interventions and the trauma patient's access to a designated rehabilitation center.

"Urban" means:

- An incorporated area over thirty thousand; or

• An incorporated or unincorporated area of at least ten thousand people and a population density over two thousand people per square mile.

"Wilderness" means any rural area not readily accessible by public or private maintained road.

Patient Care Procedure – Dispatch

Standard

Provide timely care to all trauma patients so major trauma patients are provided appropriate medical treatment within the "golden hour" of trauma treatment.

As outlined in the Regional Trauma System Plan, "Dispatch Time" is defined as "the time from when the call is received by dispatch to the time the agency is notified" (WAC 246-976-010) [See Definitions].

As outlined in the Regional Trauma System Plan, "Response Time" is measured from "the time the call is received by the trauma verified service to the time of arrival on-scene".

For major trauma patients, the following time guidelines are to be used (measured from the time the call is received by the trauma verified service to the time of arrival on-scene):

First Response (80 percent of the time)

Urban Areas	8 minutes
Suburban Areas	15 minutes
Rural/rural-suburban	45 minutes
Wilderness/Marine/Frontier	As soon as possible

Transport Response Time (80 percent of the time)

Urban Areas	10 minutes
Suburban Areas	20 minutes
Rural/rural-suburban	45 minutes
Wilderness/Marine/Frontier	As soon as possible

Procedure

A licensed ambulance and/or aid service shall be dispatched to all emergency and trauma incidents in the Northwest Region.

The highest level trauma verified ambulance in the response area should be dispatched to transport all known or suspected major trauma patients who meet, or are suspected to meet, the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1].

Patient Care Procedure – Response Times

Standard

All licensed ambulance and aid services shall respond to emergency medical and trauma incidents in a timely manner in accordance with the Northwest Region Plan and State WAC 246-976-390(10) [Addendum 4] and WAC 246-976-390(11) -Verification of Trauma Care Services [Addendum 5].

The Northwest Region EMS Council has identified the following urban, suburban, rural-suburban, rural and wilderness/marine/frontier areas response times in the Northwest Region Trauma Plan.

First Response (80 percent of the time)	
Urban Areas	8 minutes
Suburban Areas	15 minutes
Rural/rural-suburban	45 minutes
Wilderness/Marine/Frontier	As soon as possible

Transport Response Time (80 percent of the time)	
Urban Areas	10 minutes
Suburban Areas	20 minutes
Rural/rural-suburban	45 minutes
Wilderness/Marine/Frontier	As soon as possible

Procedure

In all major trauma cases, the Golden Hour shall be a dispatch/response/transport goal whenever possible.

A trauma verified service should proceed in an emergency mode to all suspected major trauma incidents until which time they have been advised of injury status to the patients involved.

Patient Care Procedure – Triage and Transport

Standard

All licensed ambulance/transport and aid services shall comply with the Northwest Region EMS & Trauma System Plan, Simple Triage and Rapid Treatment (START Triage) Protocol [Appendix 6] and the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1] and transport trauma patients to the most appropriate designated trauma center.

When a destination facility is placed on divert status, field personnel shall transport to the next closest – equal or higher designated trauma facility.

Procedure

The first trauma care providing agency to determine that the patient needs definitive medical care or meets the State of Washington Trauma Triage (Destination) Procedures [Addendum 1] criteria, shall ensure immediate contact with a Level I or Level II trauma designated facility or the agency's on-line medical control.

The receiving facility must be provided with the following information, as outlined in the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1]:

1. Identification of the EMS agency;
2. Patient's age, if known (or approximate age);
3. Patient's chief complaint(s) or problem;
4. Identification of the biomechanics and anatomy of the injury;
5. Basic vital signs (palpable pulse, where palpable, and rate of respiration;
6. Level of consciousness (Glasgow Coma Score or other means);
7. Other factors that require consultation with the base station;
8. Number of patients (if known); and
9. Estimated time of transport of the patient(s) to the nearest and highest level of trauma designated facility.
10. Estimated time of transport of the patient(s) from the scene to the nearest Level I or II facility

The first EMS person to determine that a patient meets the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1] criteria shall attach a Washington State Trauma Registry Band to the patient's wrist or ankle.

An air ambulance transport should be considered for transport by agencies in the Northwest Region when transport by ground will be greater than 30 minutes, unless weather conditions do not allow for such use, as outlined in the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1].

DATA COLLECTION

The first licensed service on scene shall be responsible for submitting the following data on all patients meeting the State of Washington Prehospital Trauma Triage (Destination) Procedures tool [Addendum 1]:

a. Run sheet number
b. Name or name code, when available;
c. Date of birth when available;
d. Age
e. Sex
f. Agency incident number;
g. Patient's trauma identification number;
h. Agency identification number;
i. First agency on scene (yes/no);
j. Transporting agency identification;
k. Level of transporting agency (BLS/ALS);
l. Incident county code;
m. Response area code of incident (urban, suburban, rural, wilderness);
n. Date of incident;
o. Time:
    1. Call received;
    2. Dispatched;
    3. Arrived at scene;
p. First scene:
    1. Systolic blood pressure;
    2. Respiratory rate;
    3. Pulse;
q. Glasgow coma score – eye, verbal and motor;
r. Systolic blood pressure less than ninety mm Hg in field (yes/no);
s. Mechanism of injury;
t. Prehospital trauma system activation (yes/no);
u. Extrication required;
v. Patient entrapped (yes/no);
w. Safety restraint or device used;
x. Field interventions done; and
y. Additional information if patient died at scene:
    1. Patient home zip code;
    2. Patient race and ethnicity when available.

The transporting service shall be responsible for submitting the following data:

a. Run sheet number or file number;
b. Name or name code
c. Date of birth, when available;
d. Age;
e. Sex;
f. Agency incident number;
g. Patient's trauma identification number
h. Agency identification number;
i. First agency on scene identification number;

j. Transporting agency identification;
k. Level of transporting agency (BLS/ALS);
l. Intra-facility transport;
m. Incident county code;
n. Response area code of incident (urban, suburban, rural, wilderness);
o. Date of incident;
p. First hospital transport to (code);
q. Second hospital transported to (code);
r. Intra-field rendezvous transport identification number;
s. Time of:
    1. Call received;
    2. Dispatch;
    3. Arrival at scene;
    4. Departure from scene;
    5. Arrival at intra-field destination or rendezvous;
    6. Arrival at first hospital;
    7. Departure from first hospital;
    8. Arrival at second hospital;
t. First:
    1. Systolic blood pressure;
    2. Respiratory rate;
    3. Pulse;
    4. Glasgow coma score – eye, verbal, and motor;
u. Systolic blood pressure less than ninety mm Hg in field;
v. Mechanism of injury;
w. Trauma triage criteria met;
x. Prehospital trauma system activation (yes/no);
y. Extrication required;
z. Patient entrapped (yes/no)
aa. Safety restrain/device used;
bb. Field interventions done;
cc. Receiving hospital contacted (code);
dd. Diverted;
ee. Mode of transport; and
ff. Additional information if patient dies in route:
    1. Patient home zip code;
    2. Patient race and/or ethnicity, when available.

Trauma verified ambulance and aid services shall collect documentation in the form of Northwest Region approved MIR forms or approved electronic computer submission. Data shall be submitted to the Department of Health trauma registry in an approved format no later than ninety days after the end of the quarter.

Patient Care Procedure – Interfacility Transport

Standard

All designated trauma facilities shall have transfer agreements for the identification and transfer of trauma patients.

All interfacility transfers shall be in compliance with current OBRA/COBRA and EMTALA regulations and must be consistent with RCW 70.170.060(2) [Addendum 7].

Procedure

This is part of the Trauma Center Designation process and is addressed in the designation application process. The Northwest Region will use the procedures outlined by each facility in their designation application.

Patient Care Procedure – Transport of Patients Outside of Base Area

Standard

All licensed ambulance and aid services shall comply with the Northwest Region EMS & Trauma System Plan and the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1] as defined in WAC 246-976-390 - Verification of Trauma Care Services [Addendum 4] and transport trauma patients to the most appropriate designated trauma center or facility.

Procedure

Patients transferred out of any local base coverage area (from either the base hospital or the field) are initially the responsibility of local on-line medical control. Prehospital personnel will follow local prehospital protocols. Initial orders, which are consistent with local prehospital protocols, will be obtained from base station on-line medical control.

When the transport service crosses into destination jurisdiction, the destination on-line medical control shall be contacted and given the following information:

1. Brief history
2. Pertinent physical findings
3. Summary of treatment (per protocols and per orders from base medical control)
4. Response to treatment
5. Current condition

The destination medical control physician may add further orders provided they are within the capabilities of the transport personnel.

The nearest trauma center base station will be contacted during the transport should the patient'' condition deteriorate and/or assistance is needed. The transport unit may divert to the closest trauma center as dictated by the patient's condition.

Patient Care Procedure – Activation of Air Ambulance for Field Response to Major Trauma

Standard

All licensed ambulance and aid services shall comply with the Northwest Region EMS & Trauma System Plan and the State of Washington Prehospital Trauma Triage (Destination) Procedures as defined in WAC 246-976-390 - Verification of Trauma Care Services [Addendum 5] and transport trauma patients to the most appropriate designated trauma center or facility.

Procedure

The decision to activate air ambulance service for field response to major trauma shall be made by the highest certified responder from the scene with on-line medical control consultation. Where Incident Command System (ICS) is used, the commander shall be an integral part of this process.

Air ambulance services requested to respond into the Northwest Region will follow their policies for accepting a field mission and their Rotary Wing Primary Service Area criteria [Addendum 8].

Regional Care Of The Critically Ill & Injured Child - Triage and Transfer Guidelines

Consideration should be given to early transfer of a child to the regional pediatric trauma center when required surgical or medical subspecialty care of resources are unavailable. These include, but are not limited to the following:

1. **Hemodynamically stable children with documented visceral injury being considered for "observational" management.** Although the efficacy of this approach in selected cases has been well documented, two significant caveats always apply:
   a) Hemodynamic *instability* mandates immediate operative intervention, and
   b) Non-operative care is safe only in an environment that provides both close clinical observation *by a surgeon* experienced in the management of childhood trauma and immediately available operative care.
2. **Children with abnormal mental status.** In all but the infant, outcome from closed head injury has been shown to be significantly better for the child than for the adult. Although the quality and timeliness of initial resuscitation are the most important *determinants of outcome* from brain injury, continued comprehensive management in specialized units with multi-disciplinary pediatric critical care teams may provide a more rapid and complete recovery.
3. **Infants and small children.** Severely injured infants and small children are the most vulnerable and, frequently, the least stable trauma victims, because they require the special resources and environment of a regional pediatric trauma center, transfer should occur as soon as safely feasible.
4. **Children with injuries requiring complex or extensive reconstruction.** These services are traditionally most available in hospitals capable of functioning as a regional pediatric trauma center. It is especially important that children with impairments requiring long-term follow-up and supportive care have this provided or at last coordinated by the regional pediatric trauma center. Longitudinal follow-up of the injury-related disability is an essential requirement of the regional pediatric trauma center's trauma registry.
5. **Children with polysystem trauma requiring organ system support.** This is especially important for those patients requiring ventilatory, cardiovascular, renal, or nutritional support. Because these problems usually occur synchronously and require precise interdisciplinary coordination, they are best managed in comprehensive facilities such as regional pediatric trauma centers.

After airway management and primary resuscitation, consider the following points for transfer guidelines. A collaborative discussion is required between the transferring and receiving attending physicians.

1. Altered level of consciousness, mental status or declining trauma score (after primary resuscitation and airway management);
2. Head injury requiring CT Scan and/or neurosurgical consultation, for example: with lateralizing signs, seizures, loss of consciousness;
3. Major thoracic injury, e.g.: hemothorax, pulmonary contusion, possible great vessel injury, cardiac tamponade, flail chest;

4. Inability to evaluate abdomen due to mental status or lack of resources such as CT or peritoneal lavage;
5. Suspicion of foreign body in lower airway or main stem bronchi;
6. Unstable spinal fracture, suspected or actual spinal cord injury;
7. Primary accidental hypothermia with core temperature of 32 degrees C or less; or hypothermia with multi-system injury and core temperature of 34 degrees C or less;
8. High risk fractures such as: pelvic fracture, long bone injuries with neurovascular involvement (compromise);
9. Significant penetrating injuries to head, neck, thorax, abdomen or pelvis;
10. Need for mechanical ventilation;
11. Evidence of onset of organ failure, for example: acute respiratory distress syndrome, cardiac, renal or hepatic failure;
12. Cardiac dysrhythmias, cardiac pacing, supraventricular tachycardia, or continuous infusion of one or more inotropic or cardiovascular agents, need for invasive monitoring;
13. Near drowning or asphyxiation with deteriorating mental status or progressive respiratory distress;
14. Burns of greater than 15% of the body (20% of age 10 or greater), 2nd degree or greater involving:
    a. The face, mouth and throat;
    b. Singed nasal hair;
    c. Brassy or sooty cough;
    d. Deep or excessive burns of the hands, feet, joints and/r perineum;
    e. Electrical injury (including lightening); and/or
    f. Chemical burns with threat of functional or cosmetic compromise.

Should be transferred to a Regional Burn Center.

Referral to these centers must be protocol-driven and continuously monitored by the quality improvement process. Access to such care must be expeditious and must reflect ONLY medical need.

Adopted from: Resources for Equal Care of the Injured Patient: 1993

Committee on Trauma: American College of Surgeons

Addendum 1 – Washington State Prehospital Trauma Triage Procedure

STATE OF WASHINGTON
PREHOSPITAL TRAUMA TRIAGE (DESTINATION) PROCEDURE

Purpose

The purpose of the Triage Procedure is to ensure that major trauma patients are transported to the most appropriate hospital facility. This procedure has been developed by the Prehospital Technical Advisory Committee (TAC), endorsed by the Governor's EMS and Trauma Care Steering Committee, and in accordance with RCW 70.168 and WAC 246-976 adopted by the Department of Health (DOH).

The procedure is described in the schematic with narrative. Its purpose is to provide the prehospital provider with quick identification of a major trauma victim. If the patient is a major trauma patient, that patient or patients must be taken to the highest level trauma facility within 30 minutes transport time, by either ground or air. To determine whether an injury is major trauma, the prehospital provider shall conduct the patient assessment process according to the trauma triage procedures.

Explanation of Process

A. **Any certified EMS and Trauma person can identify a major trauma patient and activate the trauma system.** This may include requesting more advanced prehospital services or aero-medical evacuation.

B. **The first step (1) is to assess the vital signs and level of consciousness.** The words "Altered mental status" mean anyone with an altered neurologic exam ranging from completely unconscious, to someone who responds to painful stimuli only, or a verbal response which is confused, or an abnormal motor response.

The "and/or" conditions in Step 1 mean that any one of the entities listed in Step 1 can activate the trauma system.

Also, the asterisk (*) means that if the airway is in jeopardy and the on-scene person cannot effectively manage the airway, the patient should be taken to the nearest medical facility or consider meeting up with an ALS unit. These factors are true regardless of the assessment of other vital signs and level of consciousness.

C. **The second step (2) is to assess the anatomy of injury.** The specific injuries noted require activation of the trauma system. Even in the assessment of normal vital signs or normal levels of consciousness, the presence of any of the specific anatomical injuries does require activation of the trauma system.

Please note that steps 1 and 2 also require notifying Medical Control.

D. **The third step (3) for the prehospital provider is to assess the biomechanics of the injury and address other risk factors.** The conditions identified are reasons for the provider to contact and **consult with Medical Control** regarding the need to activate the system. They do not automatically require system activation by the prehospital provider.

Other risk factors, coupled with a "gut feeling" of severe injury, means that Medical Control should be consulted and consideration given to transporting the patient to the nearest trauma facility.

Please note that certain burn patients (in addition to those listed in Step 2) should be considered for immediate transport or referral to a burn center/unit.

Patient Care Procedures

To the right of the attached schematic you will find the words "according to DOH-approved regional patient care procedures." These procedures are developed by the regional EMS and Trauma council in conjunction with local councils. They are intended to further define how the system is to operate. They identify the level of medical care personnel who participate in the system, their roles in the system, and participation of hospital facilities in the system. They also address the issue of inter-hospital transfer, by transfer agreements for identification, and transfer of critical care patients.

In summary, the Prehospital Trauma Triage Procedure and the Regional Patient Care Procedures are intended to work in a "hand in glove" fashion to effectively address EMS and Trauma patient care needs. By functioning in this manner, these two instruments can effectively reduce morbidity and mortality.

If you have any questions on the use of either instrument, you should bring them to the attention of your local or regional EMS and Trauma council or contact 1-800-458-5281.

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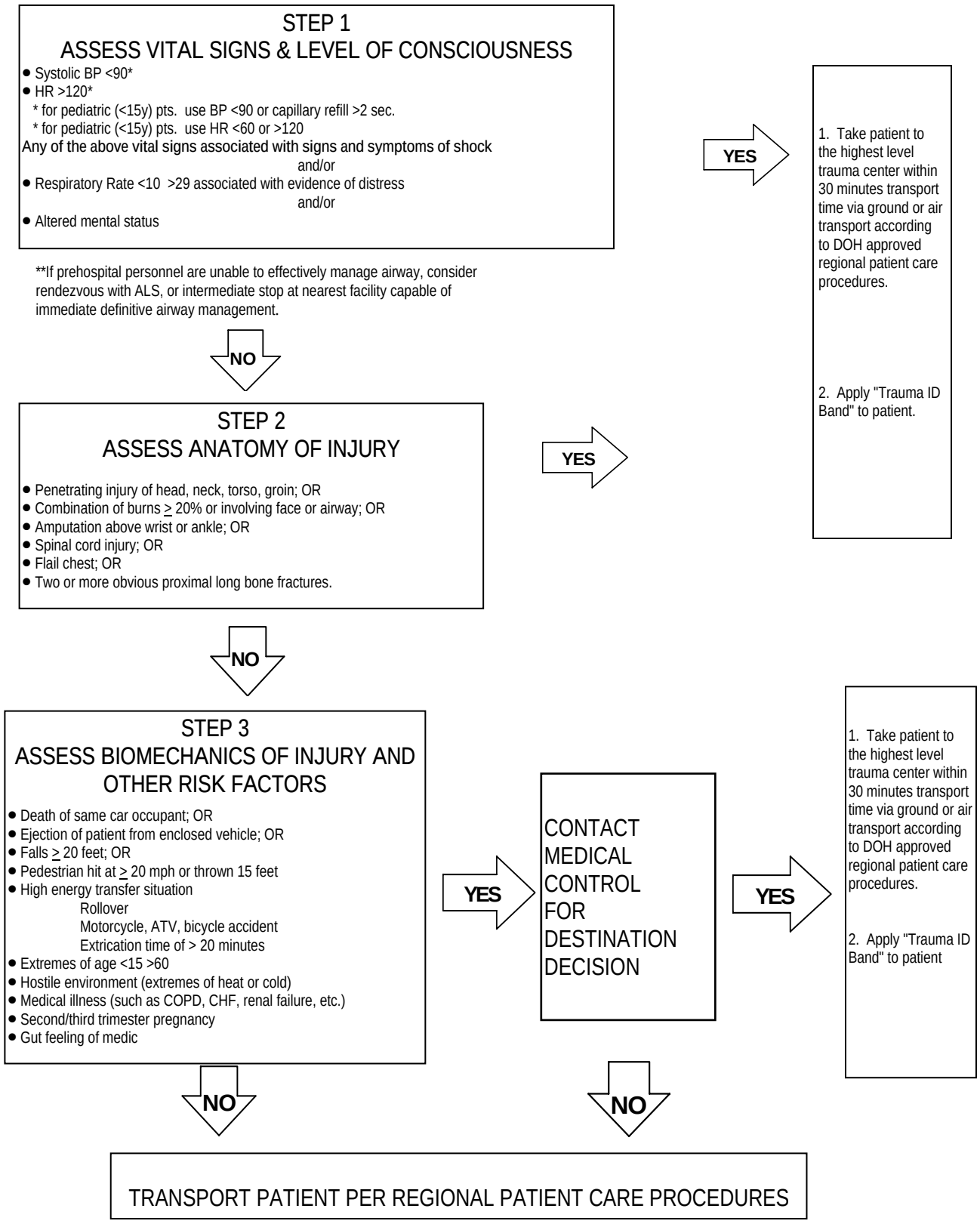
STATE OF WASHINGTON
PREHOSPITAL TRAUMA TRIAGE (DESTINATION) PROCEDURES
EFFECTIVE DATE

- Prehospital triage is based on the following 3 steps: Steps 1 and 2 require prehospital EMS personnel to notify medical control and activate the Trauma System. Activation of the Trauma System in Step 3 is determined by medical control**



Addendum 2 – RCW 70.168.060

Department duties – Timelines. The department, in consultation with and having solicited the advice of the Steering Committee shall:

(16) By July 1991, design and establish the state-wide trauma care registry as authorized in RCW 70.168.090 to

(a) assess the effectiveness of emergency medical services and trauma care delivery, and

(b) modify standards and other system requirements to improve the provision of emergency medical services and trauma care

Addendum 3 - RCW 70.168.090

State-wide data registry – Quality assurance program – Confidentiality.

(1) By July 1991, the department shall establish a state-side data registry to collect and analyze data on the incidence, severity, and causes of trauma, including traumatic brain injury. The department shall collect additional data on traumatic brain injury should additional data requirements be enacted by the legislature. The registry shall be used to improve the availability and delivery of prehospital and hospital trauma care services. Specific data elements of the registry shall be defined by rule by the department. To the extent possible, the department shall coordinate data collection from hospitals for the trauma registry with the state-wide hospital data system authorized in chapter 70.170 RCW. Every hospital, facility, or health care provider authorized to provide level I, II, III, IV, or V trauma care services, level I, II, or III pediatric trauma care services, level I, level I-pediatric, II or III trauma-related rehabilitative services, and prehospital trauma-related services in the state shall furnish data to the registry. All other hospitals and prehospital providers shall furnish trauma data as required by the department by rule.

The department may respond to requests for data and other information from the registry for special studies and analysis consistent with requirements for confidentiality of patient and quality assurance records. The department may require requestors to pay any or all of the reasonable costs associated with such requests that might be approved.

Addendum 4 - WAC 246-976-390

Verification of trauma care services

(10) Verified aid services must meet the following minimum agency response times for all major trauma responses to response areas as defined by the department and identified in the regional plan:

(a) To urban response areas: Eight minutes or less, eighty percent of the time;

(b) To suburban response areas: Fifteen minutes or less, eighty percent of the time;

(c) To rural response areas: Forty-five minutes or less, eighty percent of the time;

(d) To wilderness response areas: As soon as possible.

Addendum 5 - WAC 246-976-390

Verification of trauma care services

(11) Verified ground ambulance services must meet the following minimum agency response times for all major trauma responses to response areas as defined by the department and identified in the regional plan:

(a) To urban response areas: Ten minutes or less, eighty percent of the time;

(b) To suburban response areas: Twenty minutes or less, eighty percent of the time;

(c) To rural response areas: Forty-five minutes or less, eighty percent of the time;

(d) To wilderness response areas: As soon as possible.

(12) Verified air ambulance services must meet minimum agency response times as identified in the state plan.

Addendum 6 - Simple Triage & Rapid Treatment Triage Protocol (START Triage)

1. RPM method of identifying immediate patients:
   Respirations;
   Perfusion;
   Mental status
2. Triage Criteria
   A. Immediate (RED)
      Respiration >30 per minute or absent until head repositioned, or
      Radial pulse absent or capillary refill >2 seconds, or
      Can not follow simple commands
   B. Delayed (YELLOW)
      Respiration's present and <30 per minute, and
      Radial pulse present and can follow simple commands
      - The saying is 30 – 2 – can do, represents a delayed patient
   C. Minor (GREEN)
      Anyone that can get up and walk when you instruct them to do so
   D. Deceased (BLACK)
      Anyone not breathing after you open the airway
3. This system is limited to use in the incident where needs exceed resources immediately available
4. Frequently reassess patients and perform a more in-depth triage as more rescuers become available

Addendum 7 - RCW 70.170.060

Charity care – Prohibited and required hospital practices and policies

(2) No hospital shall adopt or maintain practices or policies which would deny access to emergency care based on ability to pay. No hospital which maintains an emergency department shall transfer a patient with an emergency medical condition or who is in active labor unless the transfer is performed at the request of the patient or is due to the limited medical resources of the transferring hospital. Hospitals must follow reasonable procedures in making transfers to other hospitals including confirmation of acceptance of the transfer by the receiving hospital.

EMTALA federal guidelines will also be followed.